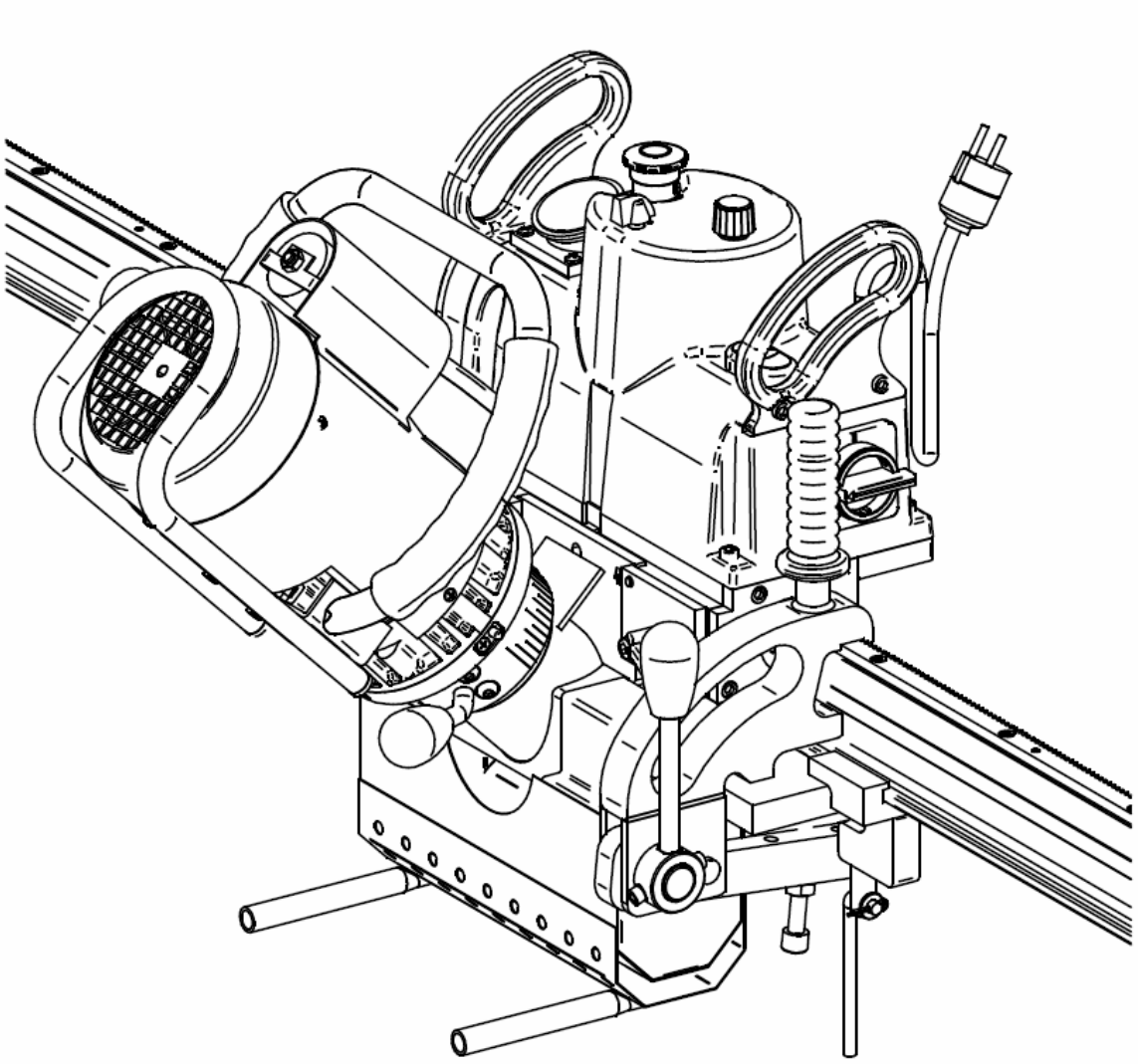
Steelmax®

The tools of innovation.

SAFETY INSTRUCTIONS
AND OPERATOR'S MANUAL
FOR
Beveling Machine for sheet edges

ABM – 26



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BEFORE YOU START WORK WITH THE MACHINE,
PLEASE READ THESE INSTRUCTIONS CAREFULLY
AND SAVE ALL RECOMMENDATIONS.

I. SAFETY INSTRUCTION

Beveling machine should be used only for the appropriate purpose. Using the machine for incompatible purposes might cause safety hazards.

1. GENERAL INFORMATION

The beveling machine type ABM-26 is designed for machining sheet edges before welding. Because of its operational simplicity and very high machining properties, the beveling machine is capable of effective and efficient machining of sheet edges within an angle range of 0º to 60º and beveling width "b" up to 1" (26 mm). With additional equipment it can be used for machining edges within an angle range of 60º to 75º.

Before starting operation, read this manual carefully and pay particular attention to safety conditions.

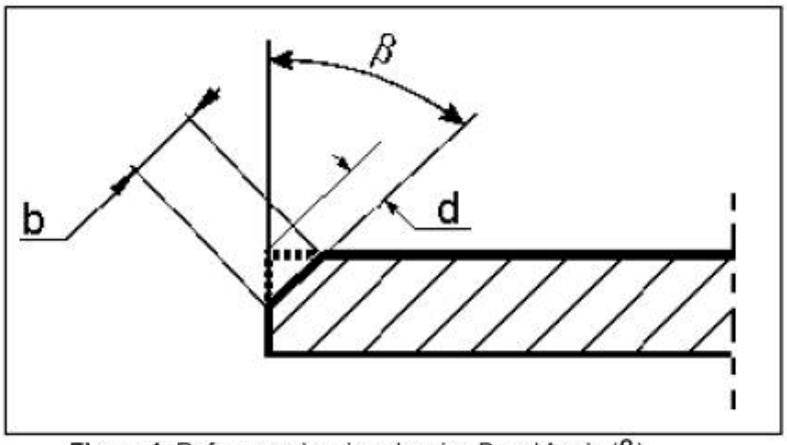


Figure 1: Reference drawing showing Bevel Angle (ß), Bevel Face Width (b) and Bevel Depth (d).

Dimension "b" (see fig.1) can be calculated from the following formula:

$$b = d/(\sin\beta * \cos\beta)$$

d max = 13 mm. It results from the machine's construction. It is recommended not to exceed 4mm per single milling pass.

b max = ~ 38mm. It results from diameter of beveling milling head Ø 50 and location of its axis with respect to machined material.

2. GENERAL SAFETY ADVICE

Beveling machine must not be used when:

1. The operator has not read the Operator's Manual.
2. The work to be done is not in agreement with the recommendations in this Manual.
3. Beveling machine is not complete or has been repaired with non-original parts.
4. Power supply parameters do not conform to those stated on the motor's plate.
5. Before starting operation the operator has not inspected the machine condition, particularly condition of the power cord, control elements and condition of machining tools as well as presence of protective screws at both ends of the guide.
6. Power supply socket is not equipped with a protection circuit.
7. Unprotected bystanders are present in the immediate vicinity of machine.

Important rules of safe use of beveling machine:

1. Before attempting to work with the machine check condition of power cord and plug.
2. Do not use power cord for unintended purpose. Never carry the machine by cord or yank it to disconnect a plug from a socket.
3. Do not let power cord be pulled tightly when in use as this will break or weaken it.
4. Inspect presence of protective screws (see item 4.4 at fig.6).
5. The beveling machine should be connected to an installation equipped with protection circuit (neutral or ground) and protected with a 16 A fuse for 220V. **When used on building sites, it must be supplied through a separation transformer made in the second class of protection**
6. Machine can be used outdoors, but is not weatherproof. Do not expose to rain, snow or frost.
7. Do not use the machine in explosion hazard zones.
8. Always wear safety goggles, gloves and ear protection.
9. It is not advisable to use blunt of damaged tools.
10. Do not remove metal chips with bare hands – **The metal chips are HOT**.
11. Carry metal chip container by handles - **container may be HOT**.

WARNING:
DO NOT CATCH ANY ROTATING MACHINE PARTS
OR METAL CHIPS FORMING DURING MILLING WITH HANDS

⚠ Warning!

DO NOT TOUCH METAL CHIP CONTAINER, BEVELING MILLING HEAD AND CHIPS FORMING DURING MILLING WITH HANDS AS THEY ARE HOT AND CAN CAUSE SERIOUS BURNS.

12. Machining inserts must be securely fastened in milling head body by means of screws.
13. If insert edge is worn, rotate the insert in its seat by 90º or replace it with a new one specified in the Operation's Manual, if there is no unused edge left.

Do not touch milling head with hands as it gets very hot and can cause serious burns.

14. Maintain machine and tools with care. Cover steel elements with thin grease layer to protect machine against rust when not in use for a long period of time.
15. It is necessary to clean metal chips from machine, particularly from the milling head every time the work is finished. Disconnect the power cord before cleaning.
16. Use tools recommended in Operator's Manual only.
17. Always use proper tools recommended by manufacturer.
18. Damaged parts of machine should only be replaced with original ones.
19. Always disconnect machine from power source before performing any maintenance or repair activities.
20. Each time before use, inspect machine to ensure there is no damage and to determine that machine will operate properly and for intended purpose.
    Check the machine for damage and that all parts are properly fastened.
21. Use only authorized service centers, authorized by Seller, for any mechanical and electrical repairs of the beveller.
22. Before each use the machine should be checked for the presence of damage. Check whether any of the parts are broken and all the parts are secured properly. Make sure to maintain proper conditions affecting work of the machine.
23. In the case that the machine falls on a hard surface, from a height, is wet or is subjected to other events that could affect its technical state - work should be terminated immediately and the machine should be sent to service for inspection as soon as possible

⚠ Please abide by all recommendations.

II. STANDARD ABM-26 SET

Standard set includes:	
• Carriage mounted on one guide segment	- 1 pc
• Guide segment	- 1 pc
• Clamping guide	- 2 pcs
• Complete milling unit – ready to operate	- 1 pc
• Bracket head assy 0 º	- 1 pc
• Bracket head assy +22.5º	- 1 pc
• Bracket head assy +37.5º	- 1 pc
• Bracket head assy +45º	- 1 pc
• Guide set block	- 3 pcs.
• Metal chips container	- 1 pc
• Chips skimming fender	- 1 pc
• Allen wrench hex s=4	- 1 pc
• Allen wrench hex s=5	- 1 pc
• Allen wrench hex s=6	- 1 pc
• Allen wrench hex s=8	- 1 pc
• Insert key – T 15	- 1 pc
• Operator's manual	- 1 pc

III. TECHNICAL SPECIFICATIONS

Power supply …….230-240 V AC
Power consumption ……..1.5 kW
Standard Beveling angles ……0º, 22.5º, 37.5º, 45º *

Max beveling width depending on angle							
Angle β	0	22.5	30	37.5	45	60	75
b in inches	1.4	1.4	1.2	1.1	1.0	1.2	1.4
b in mm	35	35.0	30.0	26.9	26.0	30.0	35.0

Working feed speed (for steel) - up to 400 mm/min

* Angle 0º allows for smoothing and levelling sheet front, e.g. after oxy-acetylene cutting. Other angles in 0-60º range on request.
** 75º Available with optional equipment.

IV. MACHINE UNITS

1. Main units

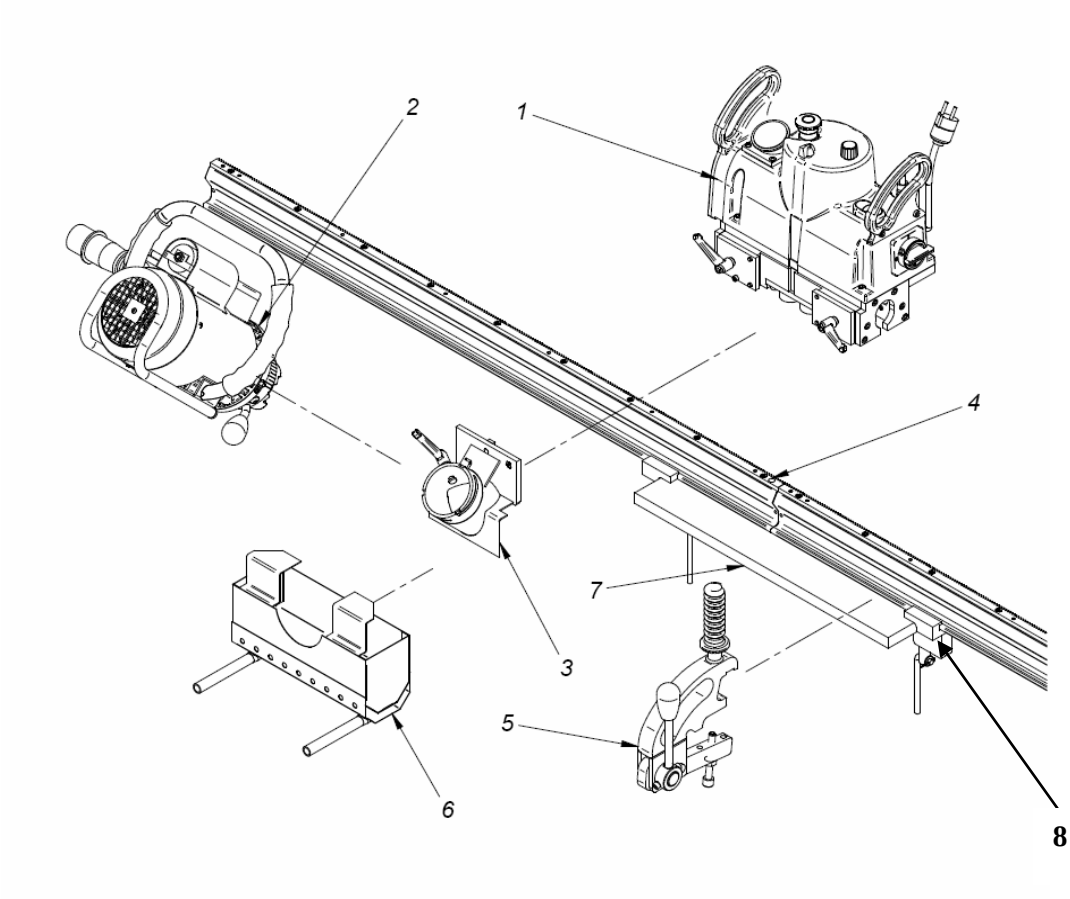


Fig. 2 Main units

1. Carriage
2. Milling unit and motor
3. Bracket head
4. Guide rail
5. Guide set block
6. Metal chip container
7. Machined material
8. Clamping guide

2. Milling machine carriage

Carriage (1) precisely transmits milling (unit 2) along guide at a speed enabling optimal milling. Carriage (1) and guide rail (4) are a set and carriage (1) should not be dismounted.

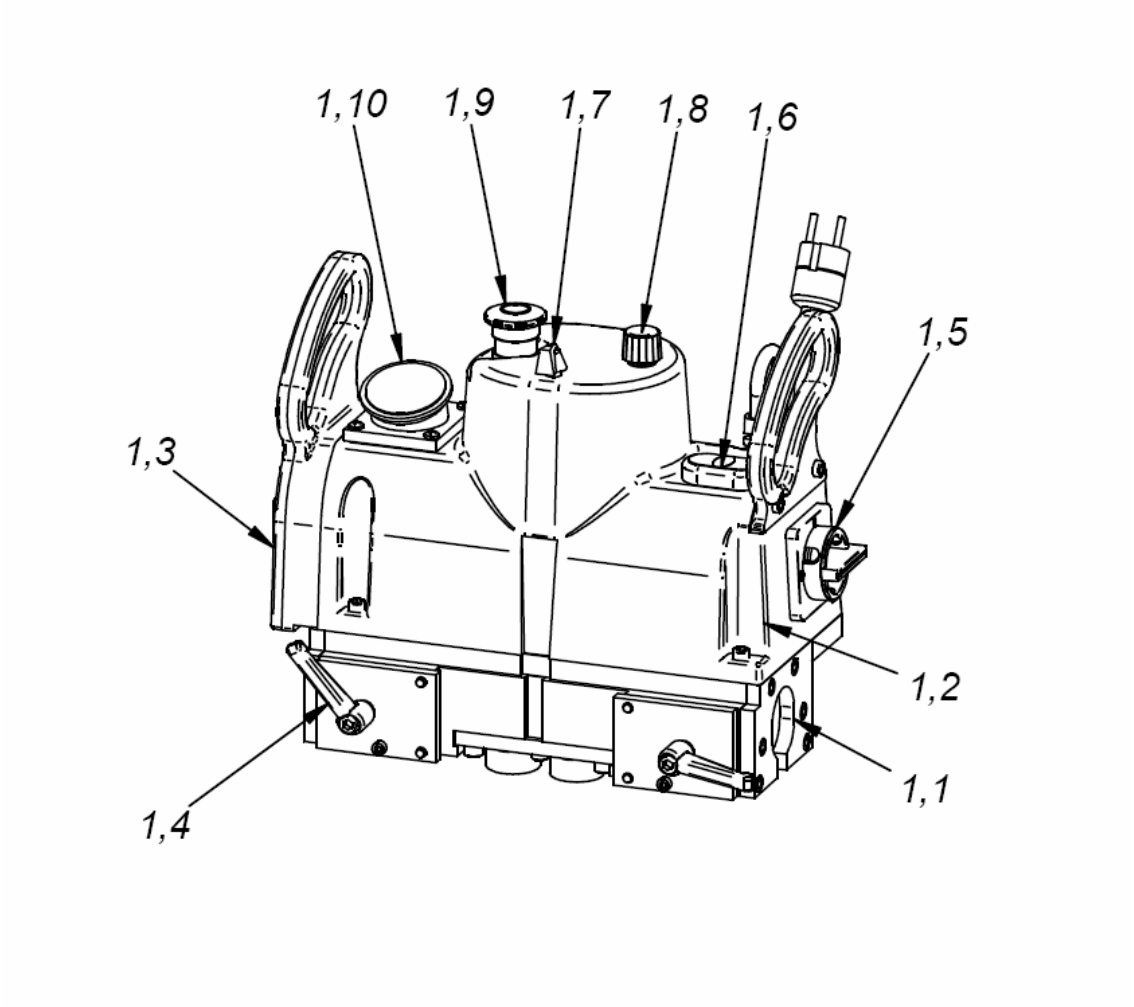


Fig. 3 Milling carriage

1.1 Drive system
1.2 Carriage housing
1.3 Electronic module
1.4 Milling unit interlock
1.5 Main power switch
1.6 Milling unit power switch
1.7 Carriage direction switch
1.8 Carriage speed potentiometer
1.9 Emergency stop switch
1.10 Milling unit power supply connection

3. Milling unit

Milling unit (2) is a special milling head mounted directly on motor shaft. The unit is equipped with beveling size adjustment.

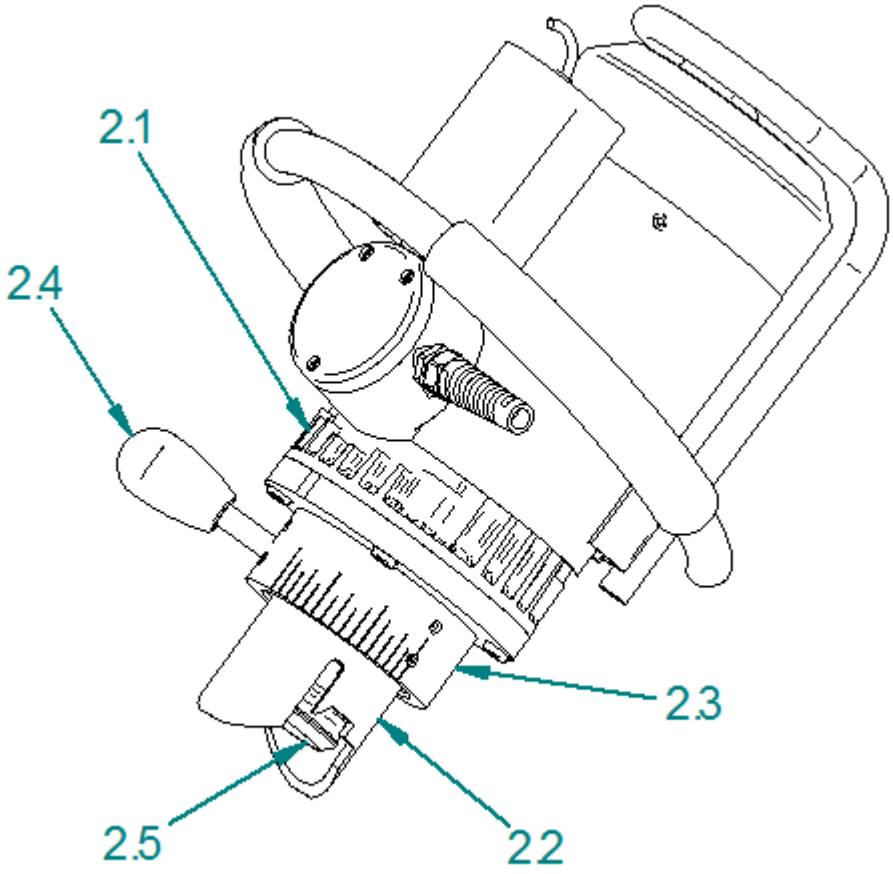


Fig. 4 Milling unit

2.1 Main motor
2.2 Milling head housing
2.3 Driving ring
2.4 Driving ring lever
2.5 Milling head (equipped with replaceable cermet inserts)

Mating of milling head housing (2.2), holder (3), and driving ring (2.3) allows regulation of depth of milling head cutting into the material.

4. Bracket head assembly

Bracket head assembly (3) is a replaceable element. Holders enable milling of sheet edges at the correct angle.

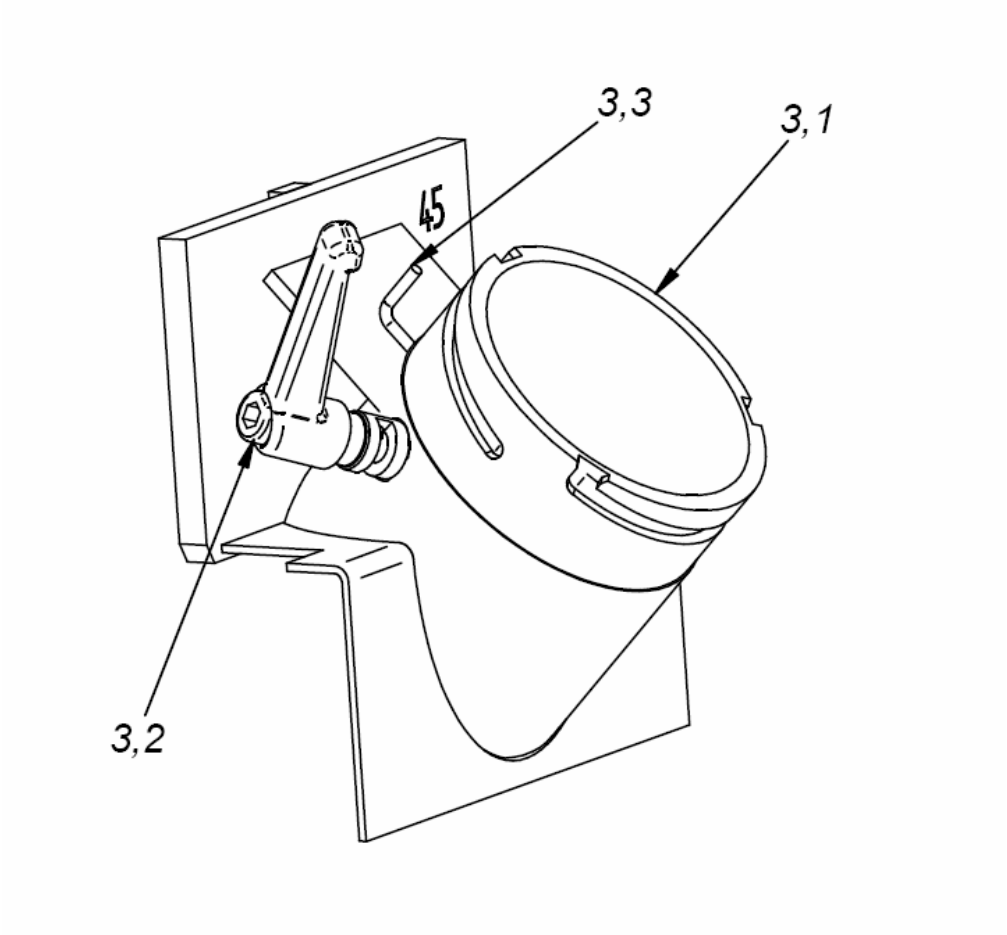


Fig. 5 Milling unit holder

3.1 Holder body
3.2 Beveling size interlock
3.3 Beveling size indicator

Holder replacement:

- loosen up beveling size interlock (3.2)
- rotate driving ring (2.3) into outermost milling head (2.5) position
- block the movement between holder and milling unit using beveling size interlock (3.2); it prevents bevel size change during milling
- secure holder, along with mounted milling (unit 2), onto carriage (1) using milling unit interlock (1.4).

5. Guide

The standard **guide rail** (4) is composed of two easily detachable segments with fitting tips (4.1 & 4.2) equipped with linking segment and two adjustable clamps (4.3). It is possible to increase the length of the guide rail by fitting additional segments of the guide rail between two segments with fitting tips. The guide rail allows the operator to machine plate edges up to 2 m long.

Caution:
Each time before start up of the machine, insure the presence of protective screws at both ends of guide (see item 4.4 at fig. 6)

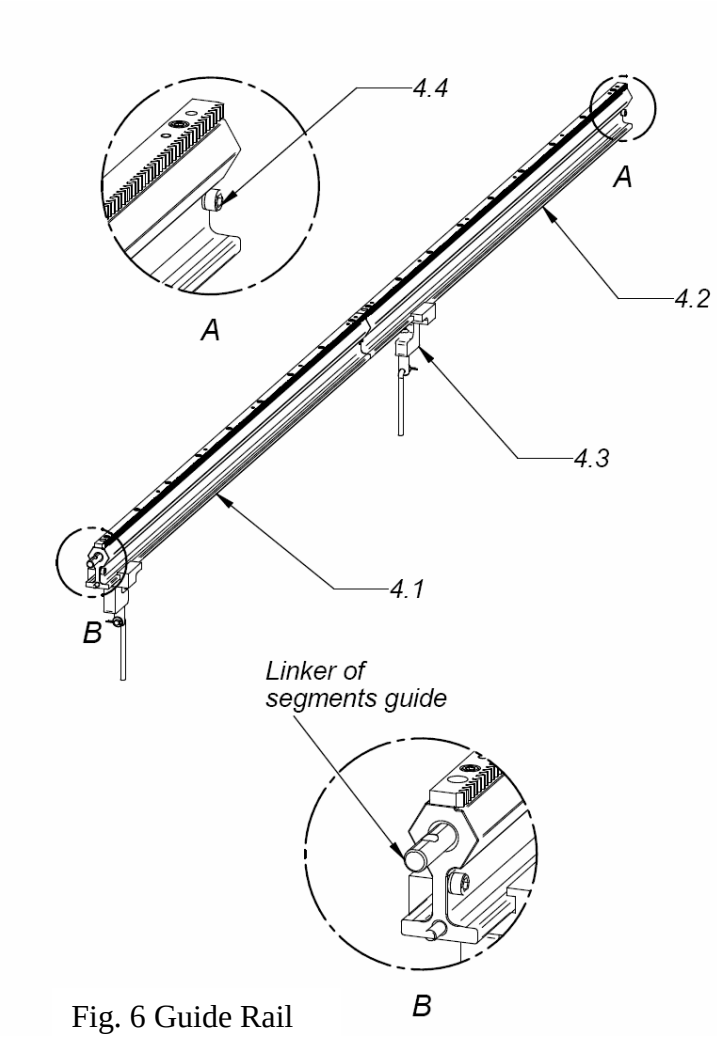


Fig. 6 Guide Rail

4.1 Segment of guide rail
4.2 Segment of guide rail
4.3 Clamping guide
4.4 Screw preventing the carriage from sliding off the guide rail.

6. Guide rail set block

The set includes three guide rail set blocks which position guiding rail against machined sheet and hold down and fix guide rail against machined material. By pressing down guide rail set block by means of lever (5.3) against machined sheet, possible out-of-flat sheet surface influence on milled bevel size is minimized. Guide rail set blocks are adjusted during operation. Two out of three guide rail set blocks should be always clamped.

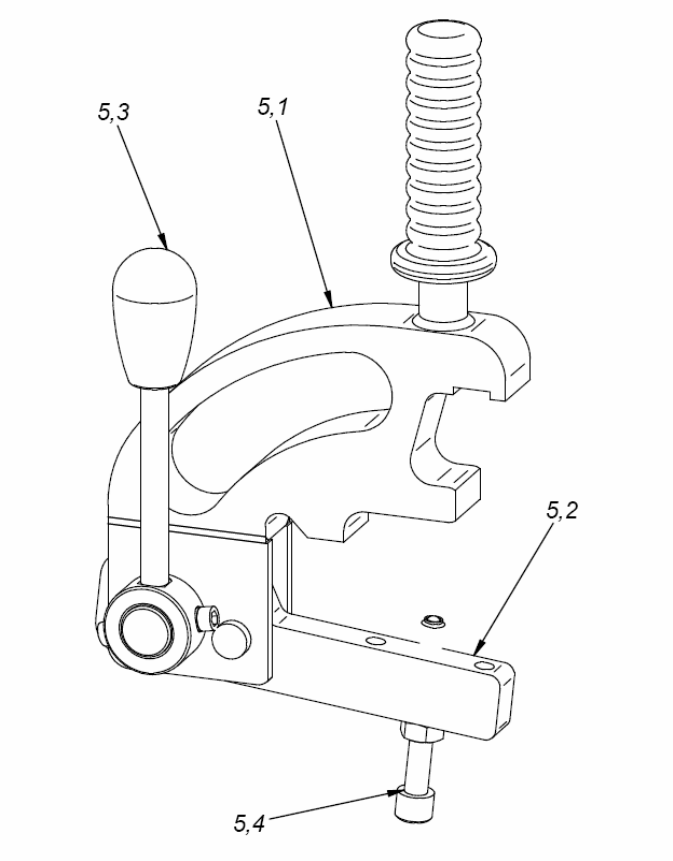


Fig. 7 Guide rail set block

5.1 Frame guide rail set block
5.2 Arm guide rail set block
5.3 Spoke handle including knob (assy)
5.4 Special screw

Special screw (5.4) is for correcting guide set block operation depending on the machined material thickness (Fig. 7 presents pressed down position).
An guide rail set block can be moved only when spoke handle (5.3) is in top upper position.

7. Exchange of milling head and machining inserts

Fig.8 - Exchange of milling head and machining inserts

8.1 Milling head
8.2 Head set screw
8.3 Shaft interlock
8.4 Cermet insert
8.5 Insert key – T 15

A) Exchange of milling head

1. Disconnect milling unit (fig.4)
   a) Take plug out of socket in carriage (fig.3 item 1.10)
   b) Release beveling size interlock (fig.5 item 3.2)
   c) Turn driving ring into highest position (milling head max. rearward) by means of driving ring lever (fig. 4 item 2.4)
   d) Pull milling unit out of milling unit holder (fig.5)
2. Press shaft interlock (item 8.3)
3. Unscrew head set screw (item 8.2)
4. Release shaft interlock and take out milling head

Note: Perform assembly in the opposite order

B) Exchange of machining inserts

1. Disconnect milling unit (fig.4)
   a) Take plug out of socket in carriage (fig.3 item 1.10)
   b) Release beveling size interlock (fig.5 item 3.2)
   c) Turn driving ring into highest position (milling head max. rearward) by means of driving ring lever (fig. 4 item 2.4)
   d) Pull milling unit out of milling unit holder (fig.5)
2. Put T 15 insert fastening key (item 8.5) in the way shown at fig.8
3. Unscrew set screw in central part of cermet insert item 8.4

NOTE: Insert has got four machining edges.

4. Rotate or replace insert.
5. Tighten set screw that fastens insert (it is recommended to use provided anti-seize lubricant on set screws for easy removal)
6. Perform activities 2 to 5 for all machining inserts - Rotate all inserts at the same time.

⚠

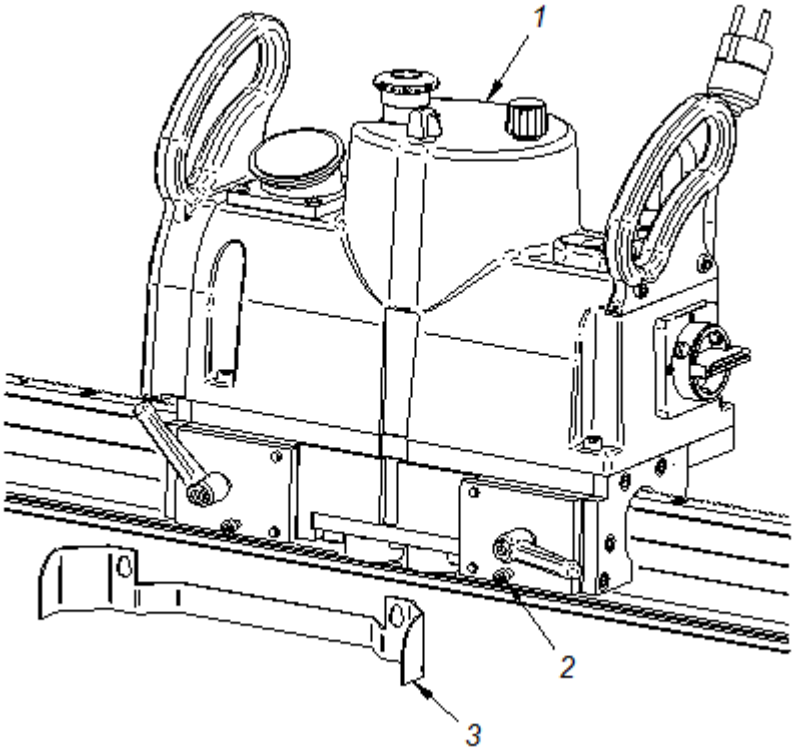
Do not touch milling head with bare hands.
Milling head gets hot up to 212ºF (100ºC) during operation and can burn bare flesh.

⚠

BEFORE YOU START WORK WITH THE MACHINE,
PLEASE READ THESE INSTRUCTIONS CAREFULLY.

8. CHIPS SKIMMING FENDER

Chips skimming fender is a piece of standard equipment for the machine, whose role is to reduce the amount of hot chips falling out onto beveled surface and to skim them to a container.



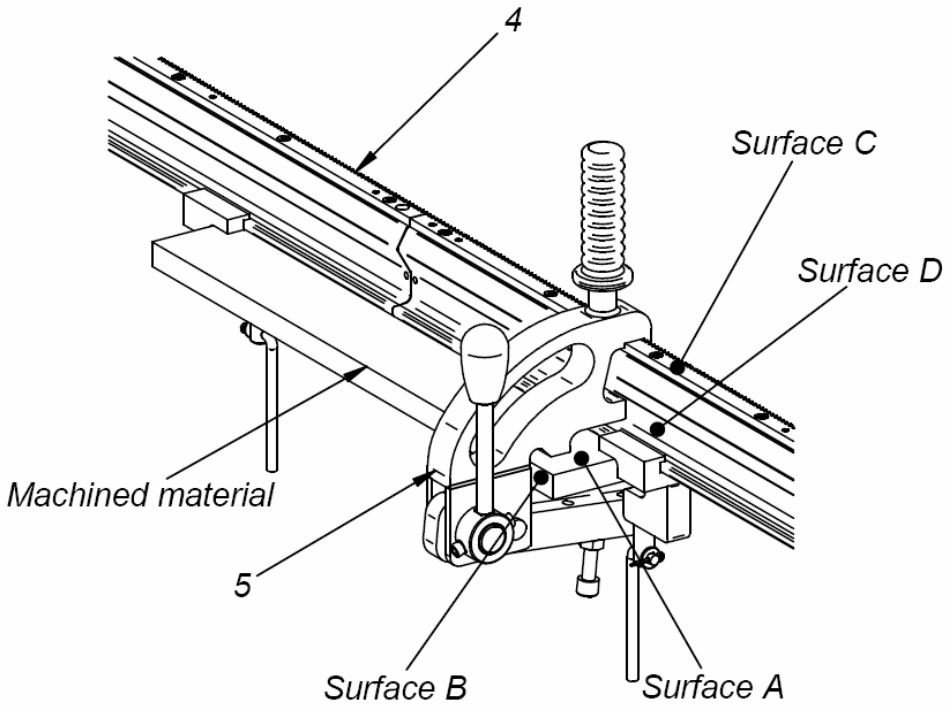
A fitting of the chips skimming fender has to be performed with the milling head bracket being removed. Two bolts M5x8 (2) have to be loosened, the chips skimming fender (3) has to be attached (3), and two bolts (2) have to be tightened.

ATTENTION!!!

The mounting of the chips skimming fender should be inspected each time before beginning the beveling operation or when the machine's configuration was changed. If the chips skimming fender is loose it may cause damage to the milling head or the milling assembly bracket.

V. OPERATION

a. Fix guiding rail with carriage onto machined sheet surface using guide rail set block. At that moment, carriage should be positioned on the edge of the guiding rail, i.e. outside machined sheet. Pay attention to distance between the rail and sheet edge – surfaces A and B of the machined material and surfaces C and D of the guiding rail should be in contact with corresponding guide rail set block surfaces. After the guiderail has been properly positioned, fix clamps onto sheet edge using the lever.



Position of guide on machined material

b. After mounting the guide rail, fix milling (unit 2) with appropriate holder (3) (depending on the angle of milling) onto carriage 1 using milling unit interlock (1.04). Then adjust beveling sizes by rotating ring (2.3). One scale on the ring corresponds to one millimeter of depth of milling head into the material.

c. After connecting milling (unit 2) by plugging plug (2.6) into connection (1.10) and switching on main switch (1.5), the machine is ready to operate. Adjust carriage speed potentiometer (1.8) to a minimum, and switch carriage direction switch (1.7) into required direction of milling. Start the main motor using the “I” switch (1.6). By slightly increasing speed gently start milling. Then correct speed in order to optimize the machining process.

Correct speed enables the operator to obtain appropriate efficiency and to prevent excessive wear of milling head inserts as well as avoid machine overload. It is advised to set the speed to such level that the overload indicator on the "I" switch (1.6) does not flash. After reaching the edge of the guiding rail (running into interlock in form of clamp (4.3) or any other obstacle) carriage movement is stopped automatically. Adjust beveling depth (in order to do that loosen up bevel size interlock using knob (3.2), rotate driving ring (2.3) using lever (2.4), and move milling head (2.5) closer to the material, and again clamp interlock (3.2). Start milling in the opposite direction using direction switch (1.7). Apply this method until required beveling depth has been obtained.

VI. REMARKS

While milling, guiding rail (4) should be pressed down by guide set block (5). It is advised to have at least one edge finder close to the present carriage position. In order to obtain that move edge finders along with the movement of the milling machine along machined edge, making sure that two of them are always clamped. In order to level milled surface, make the last movement with **minimum** depth of milling head, without pressing the guiding rail by guide rail set block (5).

If the speed is too high in relation to machined layer intersection, then the machine will stop and start again until the speed has been decreased using potentiometer (1.8) or machined layer thickness has been decreased using ring (2.3).

If for any reason the milling head (2.5) stops in the material, which is a result of the overload system function, then **before taking any other action** press the green button START (1.06), which will make carriage (1) move in the opposite direction. It moves the milling head away from the material and allows the operator to start the machine again (the withdrawal movement lasts as long as the button is pressed). In order to start the milling machine again, reset the control system by pressing the "O" button and then, after eliminating the cause of stoppage (e.g. large change of machining depth when sheet edges are uneven) by pressing the "I" button turn on the main motor.

Carriage (1) movement is possible only when milling (unit 2) main motor is connected and operating.

VII. STARTUP AND OPERATION

The milling machine is ready for operation. Before starting work, position and fix the guiding rail against the machined material. Choose appropriate milling unit holder for the required angle of beveling. It is advised to start milling with backed milling head to a maximum. It particularly concerns milling at a 0º.

After all necessary adjustments, plug the appliance into mains – **the socket must have a protection circuit**. Start operating by pressing "I" button (1.6) when main power switch (1.5) is switched on. Stop by pressing the "O" button. When starting, make sure the milling head is not in contact with sheet edge. Speed of movement is adjusted by potentiometer (1.8) and it depends on machined layer intersection and machined material type.

ATTENTION:

It is advised not to exceed 4 mm depth of milling cutter into the material in a single movement.

The milling process has been described in Chapter V OPERATION.

Operating the machine at close to maximum capacity (with overload indicator flashing temporarily) is generally permissible. However, pay attention to motor temperature which should not exceed 85ºC. Motors of this type can operate in high temperatures, but prolonged overheating can lead to winding damage. Because of that, after having operated at maximum capacity for a long time (max. 1 hour) stop operating for 10-15 min. Try not to cool the motor by leaving it running idle. When running idle, motors of that type become heated much quicker than when operating at rated capacity.

VIII. „J" TYPE CHAMFERING

When using additional equipment the power tool can be used to bevel type "J" chamfers in plates of thickness between 25 and 70 mm [Fig.9].

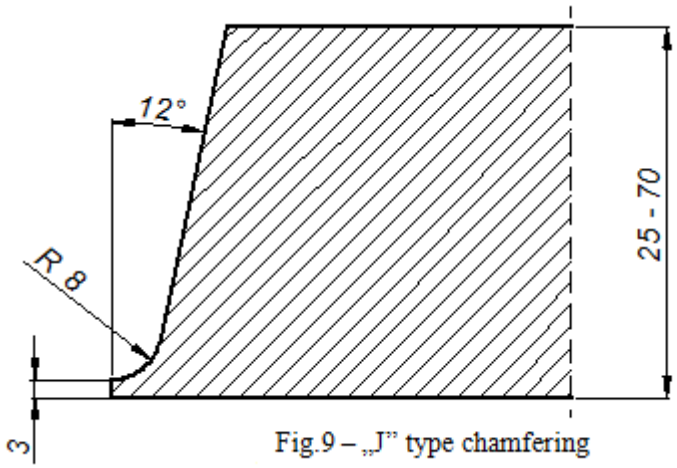


Fig.9 – „J" type chamfering

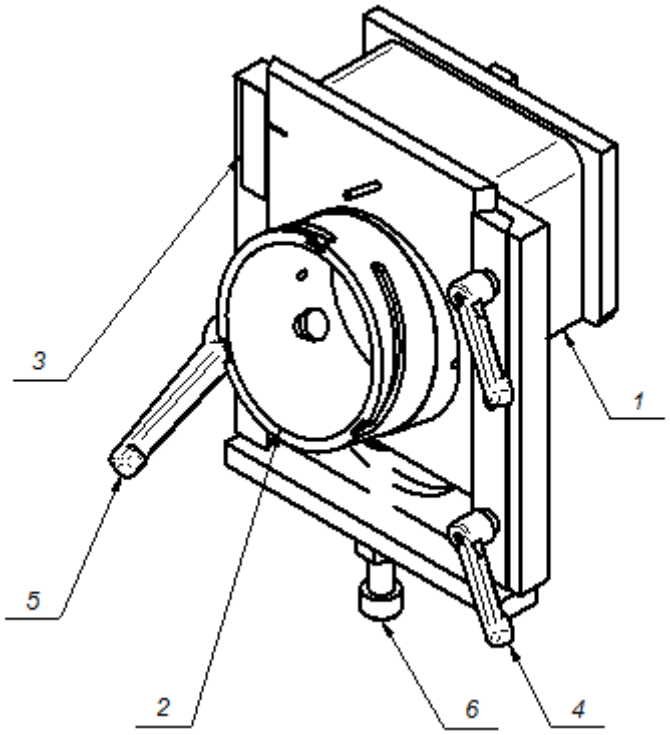
Additional equipment:

- Milling head bracket (+ 12 º) - 1 pc
- Guide setting blocks up to 70mm - 3 pcs
- Guide clamp up to 70mm - 2 pcs
- Insert key - 1 pc
- Cutter with round inserts - 1 pc

1. Design and operations description

The Milling head bracket is an interchangeable part [Fig.10]. Each milling head bracket enables plate beveling at its unique angle.

A changing of the bracket head takes place after loosening of the chamfer size lock (5) and turning the drive ring (2.3) [Fig.4] into the most outward position of a cutting head (2.5) [Fig.4] Using the chamfer size interlock's knob (5) relative movement between bracket head and the milling assembly is disabled, which results in a precise depth of the chamfer's desired size during beveling. The milling head bracket with attached milling unit (2) [Fig.2] should be attached to the carriage (1) [Fig. 2] using a milling unit lock (1.04) [Fig. 3].



1 – Holder bracket body I
2 – Holder bracket body II
3 – Scale
4 – The interlock of the cutter's vertical position
5 – Chamfer size interlock
6 – Stop buffer screw

Fig.10 – Milling bracket head 12^0

2. Operation

Before taking up "J" type chamfer beveling the milling head with "square" inserts has to be changed for a milling head with "round" inserts (see Chapter IV point 7).

Then the 12° milling head bracket is to be fixed onto the carriage (1) [Fig.2] using the milling assembly interlock (1.4) [Fig.3]. After undoing the interlock of a cutter position, the head bracket body II (2) has to be set for desired depth, and then stop buffer screw (6) has to be screwed down and the cutter's vertical position interlock (4) to the milling assembly has to be fitted (3) [Fig.2]. Using the ring (2.3) [Fig.4] the cutter's working depth has to be set.

In order to perform "J" type beveling a few passes are required, their amount depends on the depth of beveled chamfer [Fig. 11].

During work of the milling head with round inserts the carriage should be moving leftwards (up milling). The work of the machine is smoother (less vibrations) and a life of the inserts is longer and quality of beveled surface is higher. After each "pass" of the machine the carriage has to be moved back to far right position on the workpiece and the working depth of the milling assembly has to be increased in order to perform next "pass".

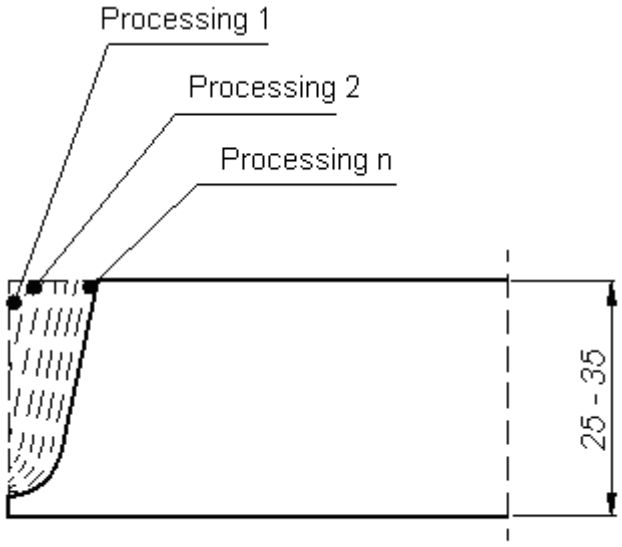


Fig. 11

For plates which thickness is greater than 35 mm the beveling operation has to be divided into two stages [Fig. 12].

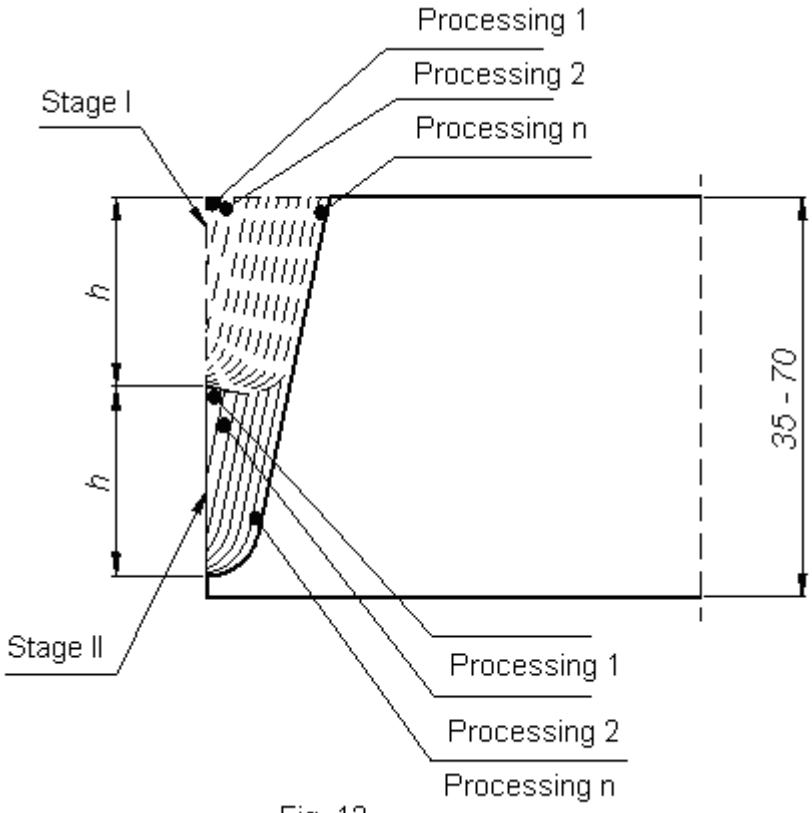
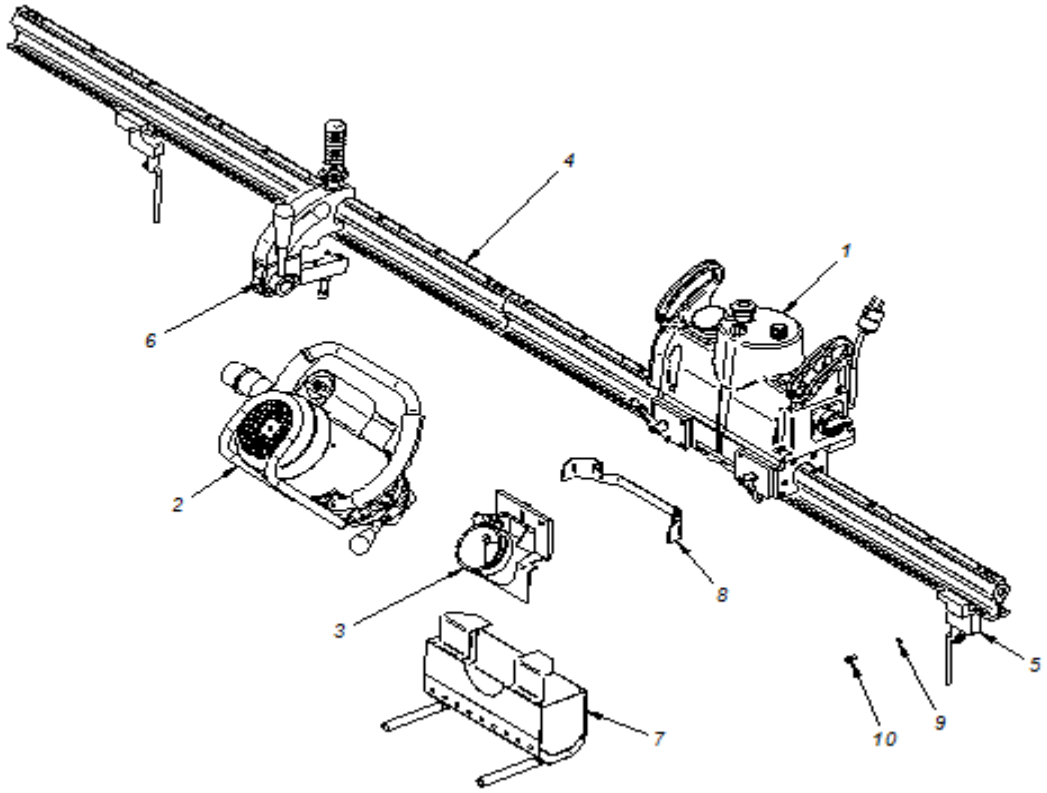


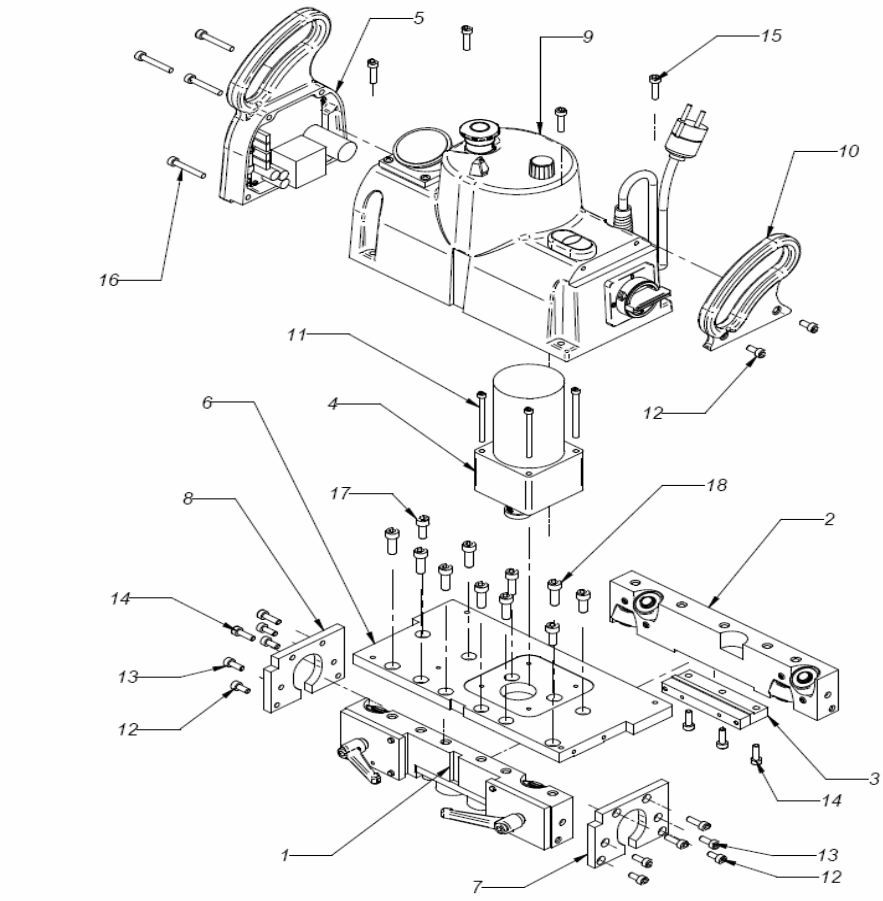
Fig. 12

FRE-0152-24-20-01-0			Steelmax ABM-26 /230V	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
1	WOZ-0152-01-00-00-1	1339	MILLING CARRIAGE ASSEMBLY	1
2	ZSP-0152-02-00-00-2	1343	MILLING ASSEMBLY	1
3	WSP-0152-03-01-00-0	617	BRACKET HEAD ASSY 45°	1
3	WSP-0152-03-03-00-0	640	BRACKET HEAD ASSY 00°	1
3	WSP-0152-03-10-00-0		BRACKET HEAD ASSY 22,5°	1
3	WSP-0152-03-11-00-0		BRACKET HEAD ASSY 37,5°	1
4	SGM-0152-04-01-00-2		SEGMENT GUIDE ASSY	2
5	ZCS-0152-04-02-00-1		CLAMPING GUIDE ASSY	2
6	UST-0152-04-04-00-3	1768	GUIDE SET BLOCK ASSY	3
7	PJM-0152-05-00-00-1		DRILLING CONTAINER ASSY	1
8	ZGR-0152-06-00-00-1		CHIPS DRIFT TENDER	1
9	PDK-000046		SPRING WASHER 6,1	2
10	SRB-000101		HEX. SOCKET BOLT M 6 x10	2
11*	TRN-000025		AUTOTRANSFORMER 115V/230V	1
12*	SKR-0152-12-00-00-0		CARRYING CASE	1
13*	ZST-0152-10-08-00-0		LABEL SET	1
14*	ZST-0152-25-00-00-0	2031	EQUIPMENT SET	1
14.1*	KLC-000007		HEX WRENCH s=4	1
14.2*	KLC-000008		HEX WRENCH s=5	1
14.3*	KLC-000009		HEX WRENCH s=6	1
14.4*	KLC-000011		HEX WRENCH s=8	1
14.5*	INS-0239-32-00-00-3		SERVICE MANUAL	1

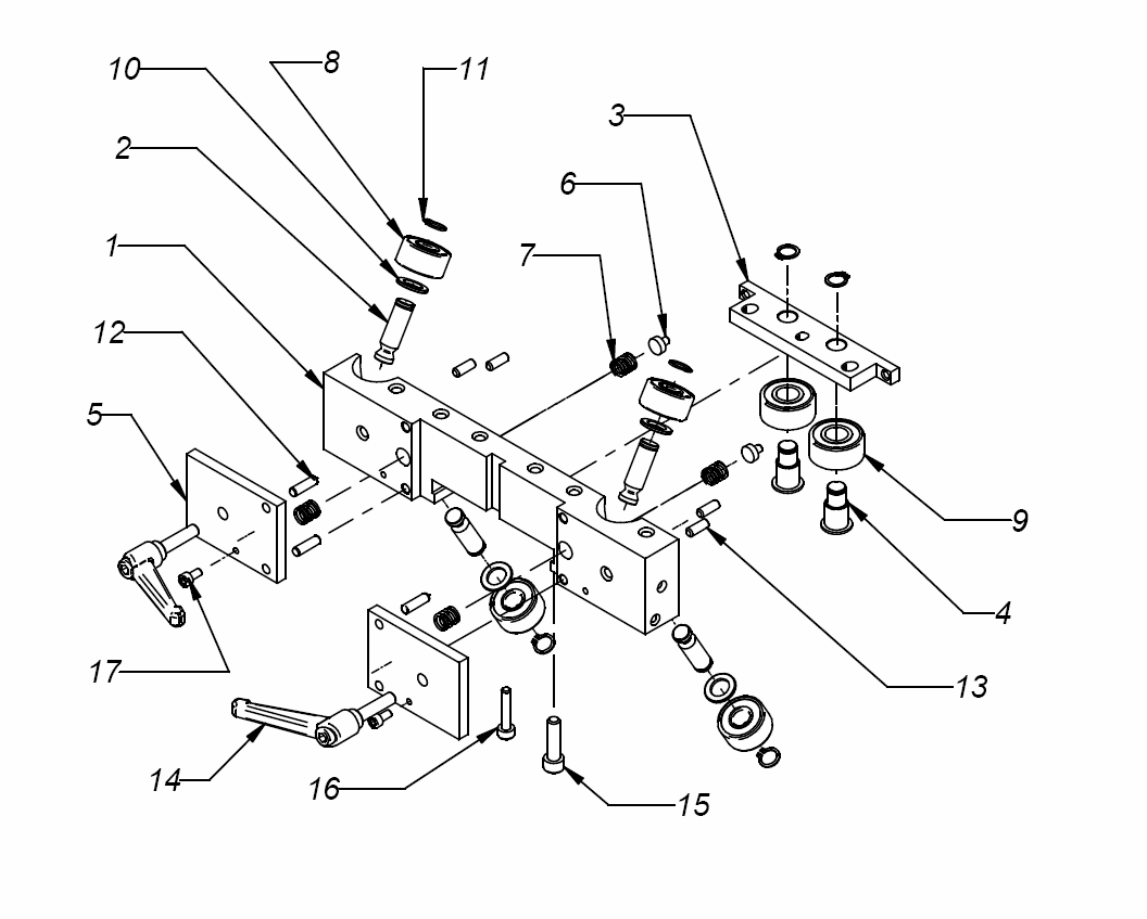
*not shown on the drawing



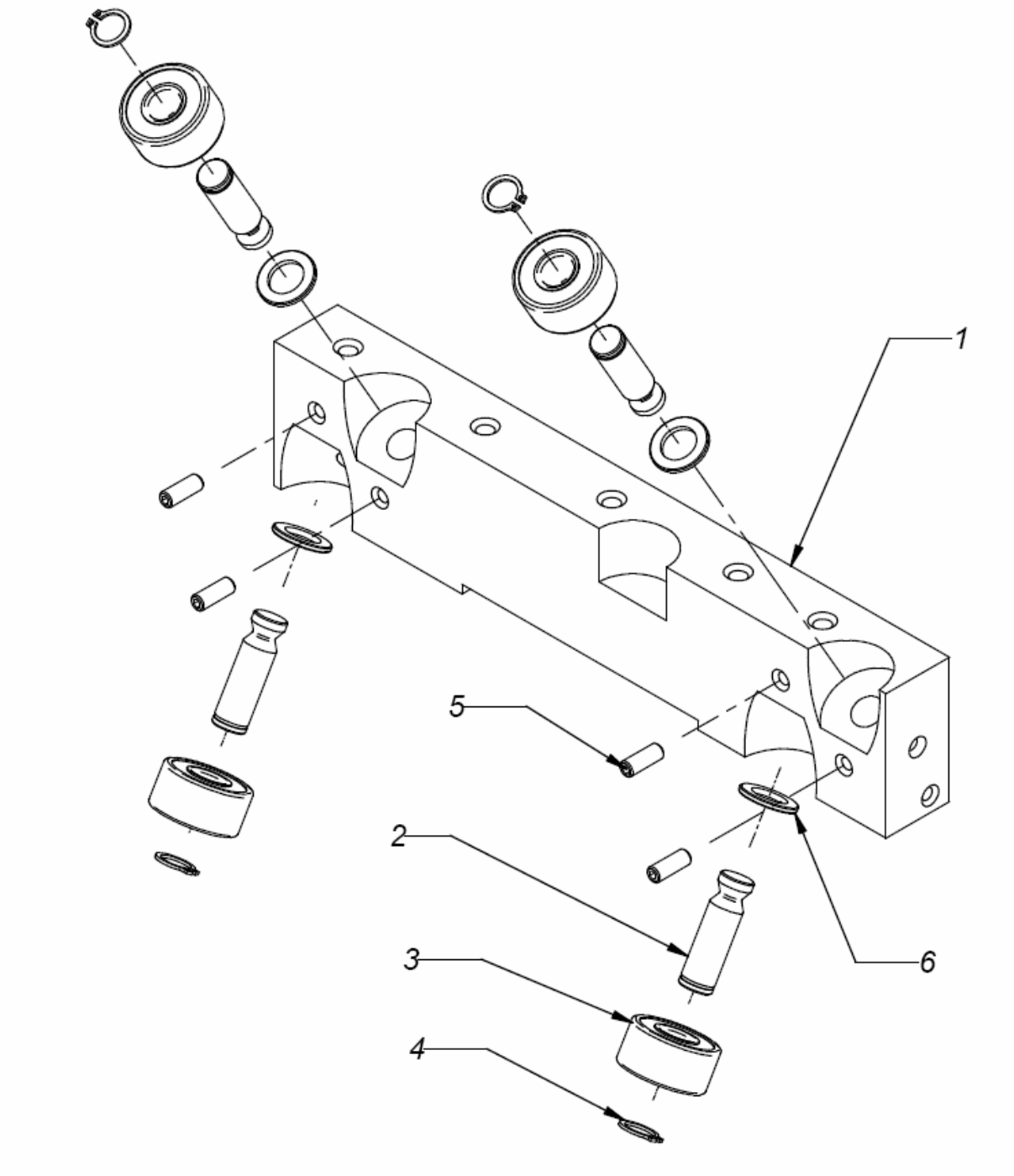
WOZ-0152-01-00-00-1			MILLING CARRIAGE ASSEMBLY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
1.1	LST-0152-01-01-00-1	1345	CARRIAGE FRONT STRIP ASSY	1
1.2	LST-0152-01-02-00-0	475	CARRIAGE BACK STRIP ASSY,	1
1.3	AMR-0152-01-03-00-1		SHOCK ABSORBER VIBRATION ASSY	1
1.4	SLN-0152-01-04-00-0		MOTOR FEED ASSY,	1
1.5	ZSP-0152-01-05-00-0	477	ELECTRONIC CONTROL SYSTEM ASSY,	1
1.6	PLY-0152-01-06-00-0	478	CARRIAGE MAIN PLATE,	1
1.7	LCZ-0152-01-07-00-0	479	CARRIAGE GIUDE CONNECTOR RIGHT,	1
1.8	LCZ-0152-01-08-00-0	480	CARRIAGE GIUDE CONNECTOR LEFT,	1
1.9	OBD-0152-01-09-00-0	481	CARRIAGE HOUSING ASSEMBLY,	1
1.10	UCW-0152-01-10-00-1	488	CARRIAGE HOLDER,	1
1.11	SRB-000219		HEX. SOCKET BOLT M5 x 65	4
1.12	SRB-000105		HEX. SOCKET BOLT M6X14	6
1.13	SRB-000106		HEX. SOCKET BOLT M6X16	4
1.14	SRB-000114		HEX. SOCKET BOLT M6x20	7
1.15	SRB-000115		HEX. SOCKET BOLT M6x25	4
1.16	SRB-000124		HEX. SOCKET BOLT M6X40	4
1.17	SRB-000148		HEX. SOCKET BOLT M8x20	3
1.18	SRB-000155		HEX. SOCKET BOLT M8X30	8



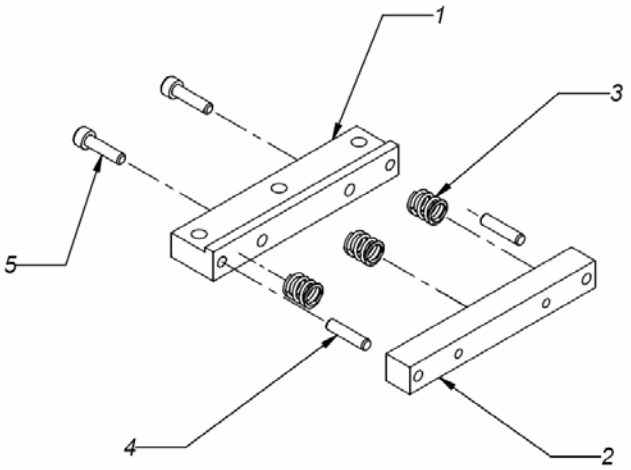
LST-0152-01-01-00-1			CARRIAGE FRONT STRIP ASSY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
1.1.1	LST-0152-01-01-01-1	1346	FRONT STRIP	1
1.1.2	WLK-0152-01-01-02-0		BEARING GIUDANCE SHAFT,	4
1.1.3	OBS-0152-01-01-03-0		BEARING HOLDER RESISTANCE,	1
1.1.4	WLK-0152-01-01-04-0		BEARING RESISTANCE SHAFT,	2
1.1.5	BLD-0152-01-01-05-1		MILLING BLOCKING	2
1.1.6	PRT-0152-01-01-06-0		SPRING BAR,	2
1.1.7	SPR-0130-20-07-00-0		SPRING I 1,5x10x15,	2
1.1.8	LOZ-000091		BEARING 12x32x15,9,	4
1.1.9	LOZ-000092		BEARING 15x35x15,9,	2
1.1.10	PDK-000104		DECREASE ROUND WASHER 13,	4
1.1.11	PRS-000003		EXTERNAL RETAINING RING 12Z	6
1.1.12	KLK-000060		PIN 6n6X20,	4
1.1.13	WKR-000051		SCREW M6x16,	4
1.1.14	RKJ-000013		HANDLEVER GN 300-63-M8-32-0	2
1.1.15	SRB-000154		HEX. SOCKET BOLT M8 x 30	2
1.1.16	SRB-000119		HEX. SOCKET BOLT M6x30	1
1.1.17	SRB-000098		HEX. SOCKET BOLT M5x10	2



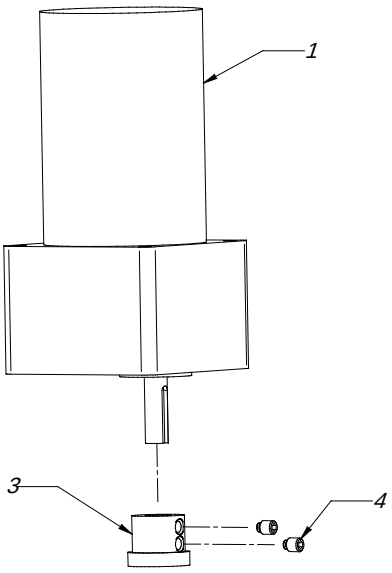
LST-0152-01-02-00-0			CARRIAGE BACK STRIP ASSY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
1.2.1	LST-0152-01-02-01-0	476	BACK STRIP,	1
1.2.2	WLK-0152-01-01-02-0		BEARING GIUDANCE SHAFT,	4
1.2.3	LOZ-000091		BEARING 12x32x15,9,	4
1.2.4	PRS-000003		EXTERNAL RETAINING RING 12Z	4
1.2.5	WKR-000051		SCREW M6x16,	4
1.2.6	PDK-000104		DECREASE ROUND WASHER 13,	4



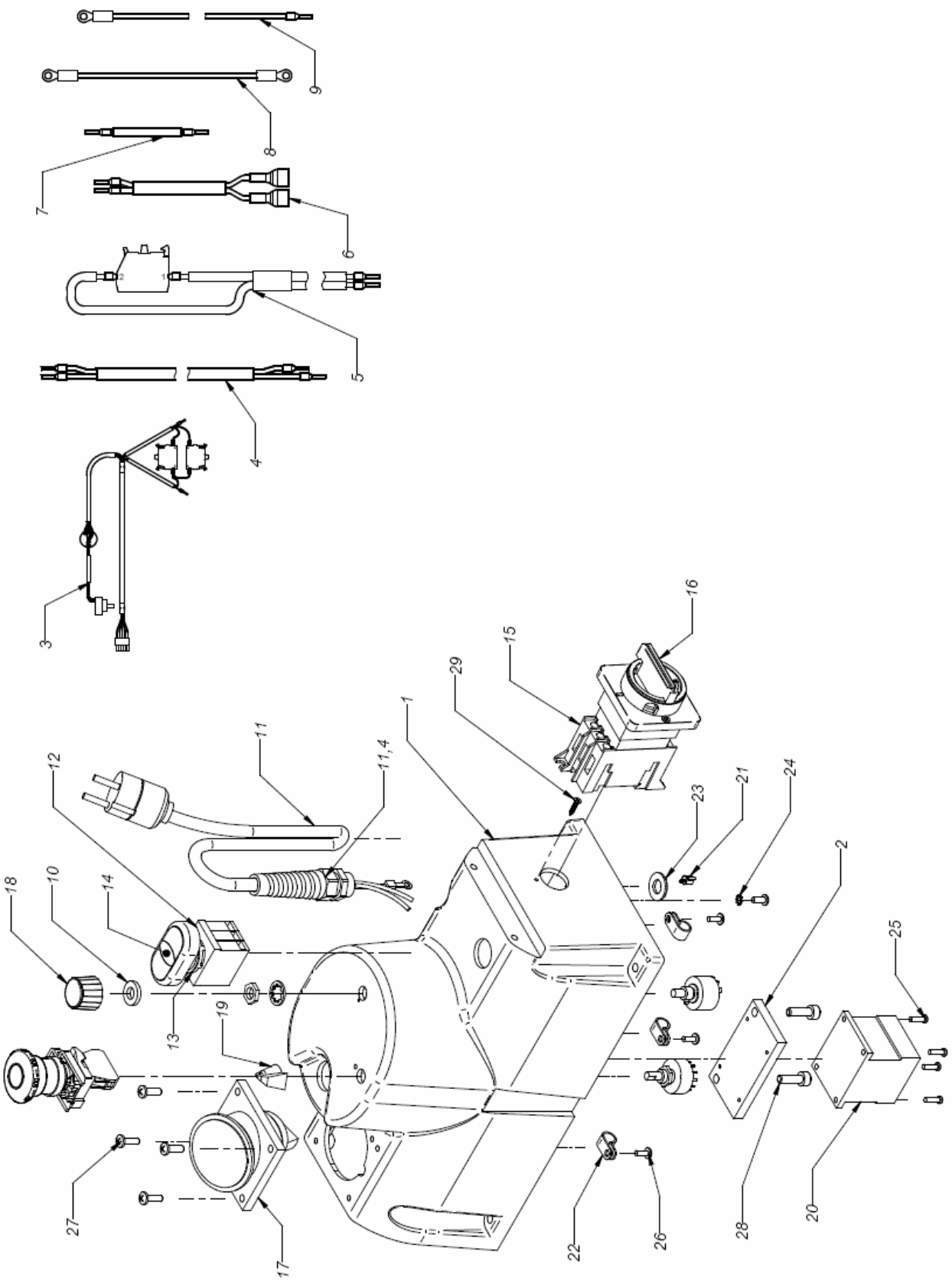
AMR-0152-01-03-00-1			SHOCK ABSORBER VIBRATION ASSY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
1.3.1	KRP-0152-01-03-01-1		VIBRATE SHOCK ABSORBER FRAME	1
1.3.2	SLZ-0152-01-03-02-1		SHOCK ABSORBER SLIPPER	1
1.3.3	SPR-0130-20-07-00-0		SPRING I 1,5x10x15,	3
1.3.4	KLK-000096		PIN 5n6x22,	2
1.3.5	SRB-000087		SCR,SHCS M5 x 25 DIN 912	2



SLN-0152-01-04-00-0			MOTOR FEED ASSY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
1.4.1	SLN-000105		MOTOR,	1
1.4.3	KOL-0152-01-04-02-0		DRIVE WHEEL z=16, m=1,5,	1
1.4.4	WKR-000022		HEX SET SCREW-M 6 x 8	2



OBD-0152-01-09-00-0			CARRIAGE HOUSING ASSEMBLY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
1.9.1	OBD-0152-01-09-01-1	482	CARRIAGE HOUSING,	1
1.9.2	PDS-0152-01-09-02-0		CONTACTOR BASE,	1
1.9.3	WZK-0152-01-09-03-0		CONTROLLER WIRE ASSY,	1
1.9.4	WZK-0152-01-09-04-0		MAIN SWITCH-KEY WIRES,	1
1.9.5	WZK-0152-01-09-05-0		SAFETY SWITCH WIRES,	1
1.9.6	WZK-0152-01-09-06-0		MOTOR SOCKET WIRES,	1
1.9.7	PWD-0152-01-09-07-0		CONTACTOR LEAD ASSY,	1
1.9.8	PWD-0152-01-09-08-0		BODY EARTH CONDUCTOR ASSY,	1
1.9.9	PWD-0152-01-09-09-0		MOTOR SOCET EARTH CONDUCTOR,	1
1.9.10	WKL-0152-01-09-10-0		POTENTIOMETER INSERT BRAKING,	1
1.9.11	SZN-0212-10-02-00-2		POWER CORD 230V 3x1	1
1.9.11.4	DLW-000007		STRAIN RIELIEF PG11	1
1.9.12	NPD-000004		DUAL PUSH-BOTTON DRIVE M22,	1
1.9.13	LCZ-000012		CONNECTOR FIX M22-A,	1
1.9.14	DDA-000039		RED DIODE LED 18-30V,	1
1.9.15	RZL-000005		DISCONNECTOR 25A	1
1.9.16	PKT-000024		RED-YELLOW HANDWEEL,	1
1.9.17	GNZ-000023		SOCKET 16A,	1
1.9.18	PKT-000022		POTENTIOMETER HANDWEEL 20,	1
1.9.19	PKT-000013		HANDWHEEL CK 1032	1
1.9.20	STY-000003		MINIATURE CONTACTOR MOTOR ,	1
1.9.21	BLD-000002		CABLE CLAMP 9,8-11,8,	1
1.9.22	OBJ-000001		HOLDER FOR FIX LEADS 9,	2
1.9.23	PDK-000025		ROUND WASHER 10,5	1
1.9.24	PDK-000060		SPRING WASHER-4.3	1
1.9.25	WKR-000179		CROSS RECESSED SCREW M3x12	4
1.9.26	WKR-000183		SCREW M4X10 PHCRMS	4
1.9.27	WKR-000197		SCREW M5x16,	4
1.9.28	SRB-000210		HEX. SOCKET BOLT M5x20	2
1.9.29	WKR-000379		CROSS RECESSED PAN HEAD TAPPING SCREW 2,9x16	2
1.9.30	ZLP-000011		HANDWHEEL PLUG fi20	1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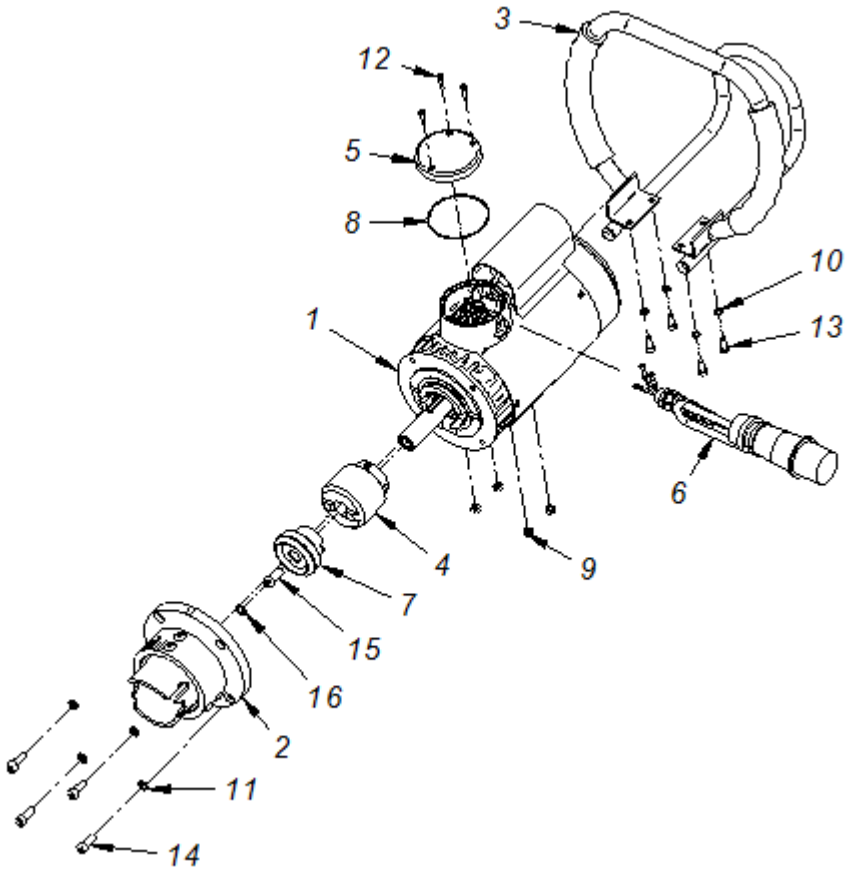
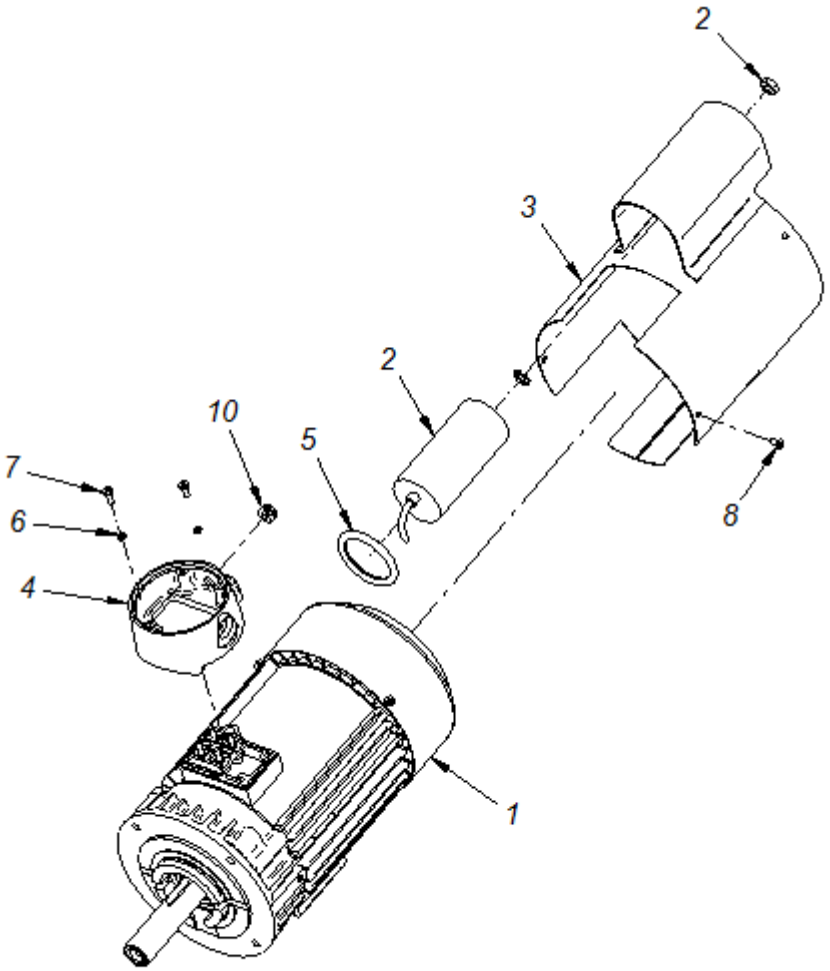
ZSP-0152-02-00-00-2			MILLING ASSEMBLY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
2.1	SLN-0152-02-01-00-1	1852	MOTOR 230V ASSY	1
2.2	GLW-0152-02-02-00-2	1789	HEAD ASSY	1
2.3	UCW-0152-02-03-00-0	612	MILLING HOLDER ASSY	1
2.4	ZBI-0152-02-04-00-1		MILLING BRUSCH	1
2.5	PKR-0152-02-06-00-1	614	CAN COVER	1
2.6	PWD-0152-02-08-00-0		MOTOR LEAD ASSY	1
2.7	GLW-0152-02-12-00-0		MILLING HEAD ASSY.	1
2.7.1*	GLW-000013		SPECIAL MILLING HEAD,	1
2.7.2*	PLY-000197		SPECIAL INSERT	7
2.7.3*	SRB-000296		SCREW T15	7
2.8	PRS-000190		SEAL O-RING 72x2	1
2.9	NKR-000018		HEX. NUT M6	4
2.10	PDK-000048		SPRING WASHER 6,1	4
2.11	PDK-000051		SPRING WASHER 8.2	4
2.12	WKR-000341		SCREW -M4X20	3
2.13	SRB-000107		HEX. SOCKET BOLT M6x16	4
2.14	SRB-000148		HEX. SOCKET BOLT M8x20-10,9	4
2.15	SRB-0152-02-11-00-0		HEX. SOCKET BOLT M10x25	1
2.16	PRS-000260		RETAINING RING INTERNAL 14w	1

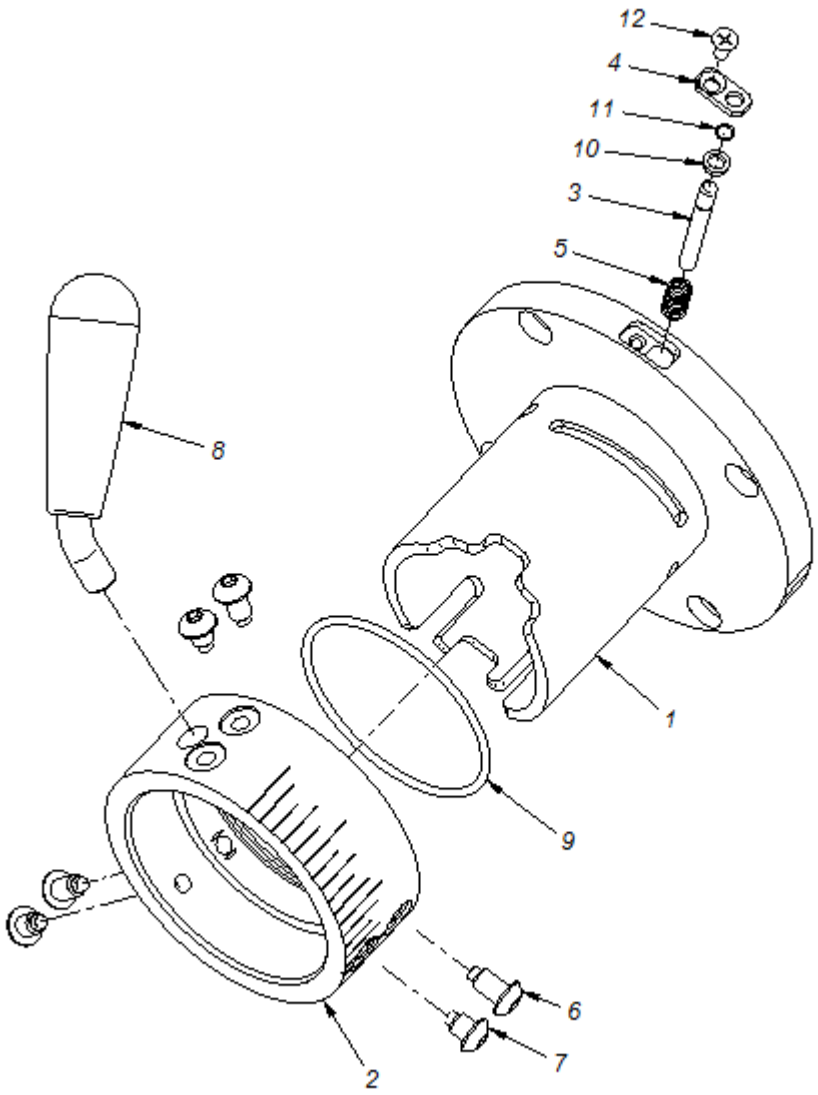
*not shown on the drawing



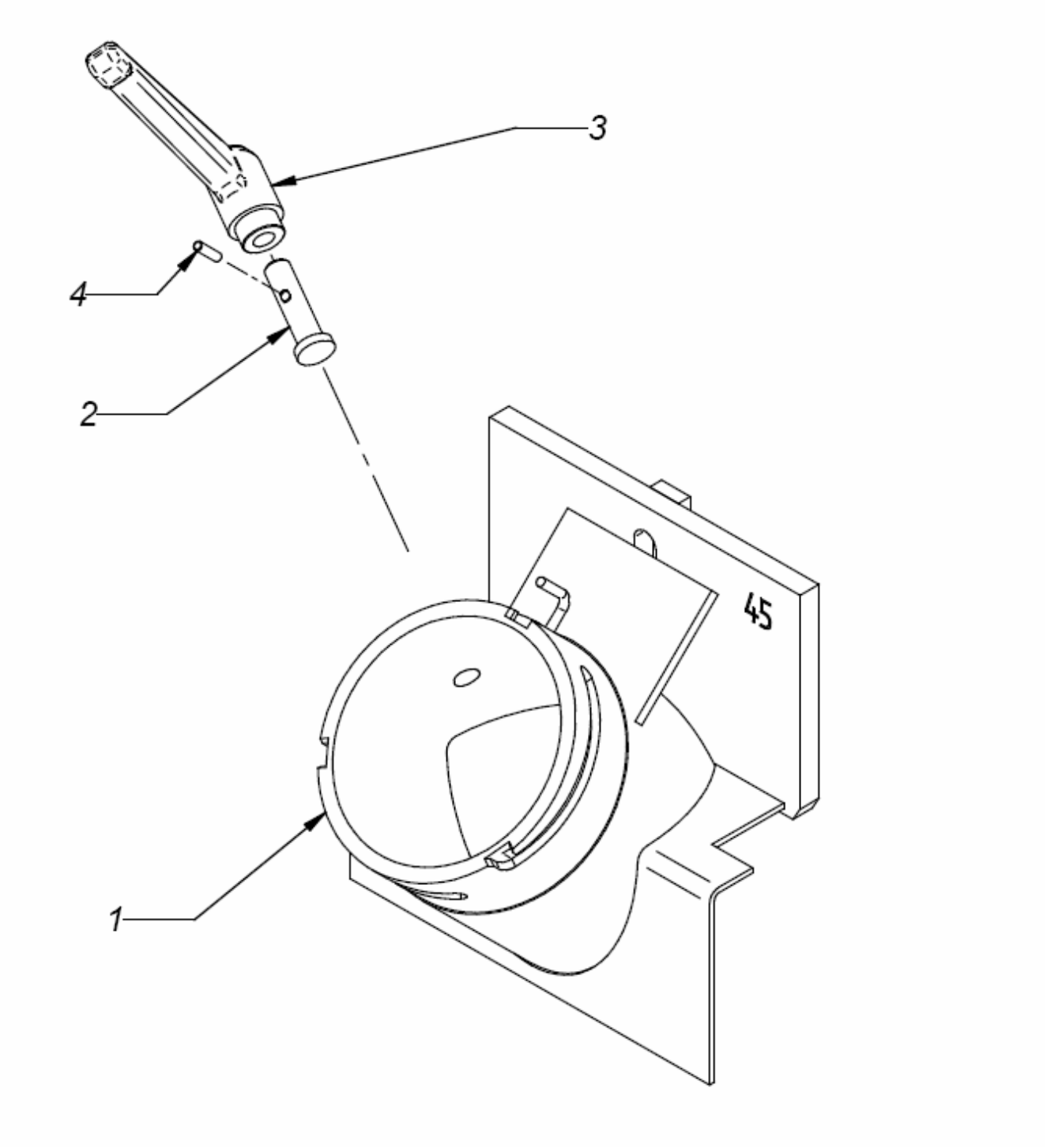
SLN-0152-02-01-00-1			MOTOR 230V ASSY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
2.1.1	SLN-0152-02-01-00-2		MOTOR 230V	1
2.1.2	KND-000116		Capacitor 40uF /230V	1
2.1.3	OSL-0152-02-10-00-1		MOTOR GUARD ASSY	1
2.1.4	KRP-0152-02-05-00-3	1347	CAN FRAME	1
2.1.5	PRS-000235		SEAL O-RING 44x6	1
2.1.6	PDK-000043		SPRING WASHER 4,1	2
2.1.7	WKR-000184		SCREW M4X12	2
2.1.8	WKR-000193		SCREW M4x8	2
2.1.9	PDK-000065		SPRING WASHER 8,4	1
2.1.10	PRP-000003		SNAP BUSHING LA6	1



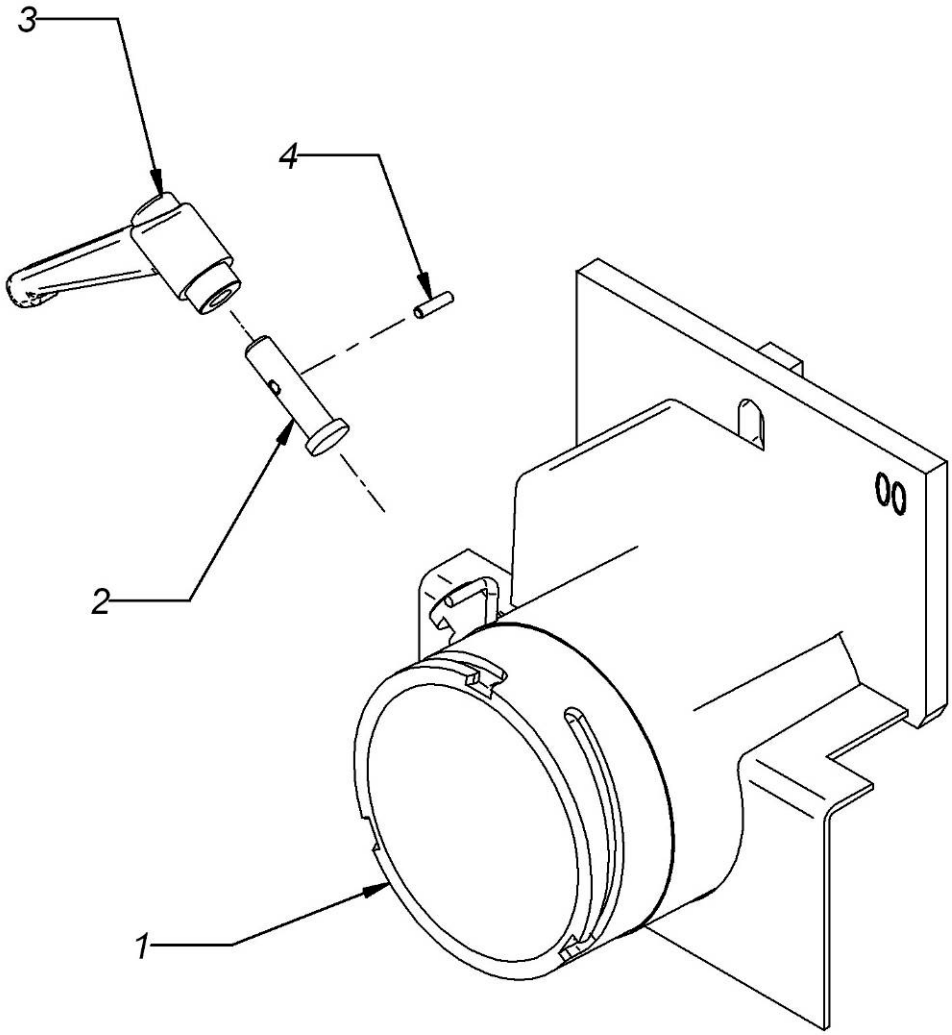
GLW-0152-02-02-00-2			SPINDLE HOUSING ASSY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
2.2.1	KRP-0152-02-02-10-2	1790	FRAME HEAD	1
2.2.2	PRS-0152-02-02-20-0	611	WELDING DRIVING RING,	1
2.2.3	BLD-0152-02-02-03-1		MILL BLOCKADE	1
2.2.4	PLY-0152-02-02-04-1		PLATE BLOCKADE MILL	1
2.2.5	SPR-0152-02-02-05-0		SPRING 8x14,5x0,8,	1
2.2.6	WKR-0152-02-02-06-0		SPECIAL SCREW M6x16,	3
2.2.7	WKR-0152-02-02-07-0		SPECIAL SCREW M8x12,	3
2.2.8	RKJ-000040		KNOB Ø12 / 1	1
2.2.9	PRS-000232		SEAL O-RING 77x3,	1
2.2.10	PRS-0152-02-02-08-1		RING BLOCKADE MILL	1
2.2.11	PRS-000250		PROTECTIVE SPRING RING 6x08	1
2.2.12	WKR-000155		SCREW M5x10	1



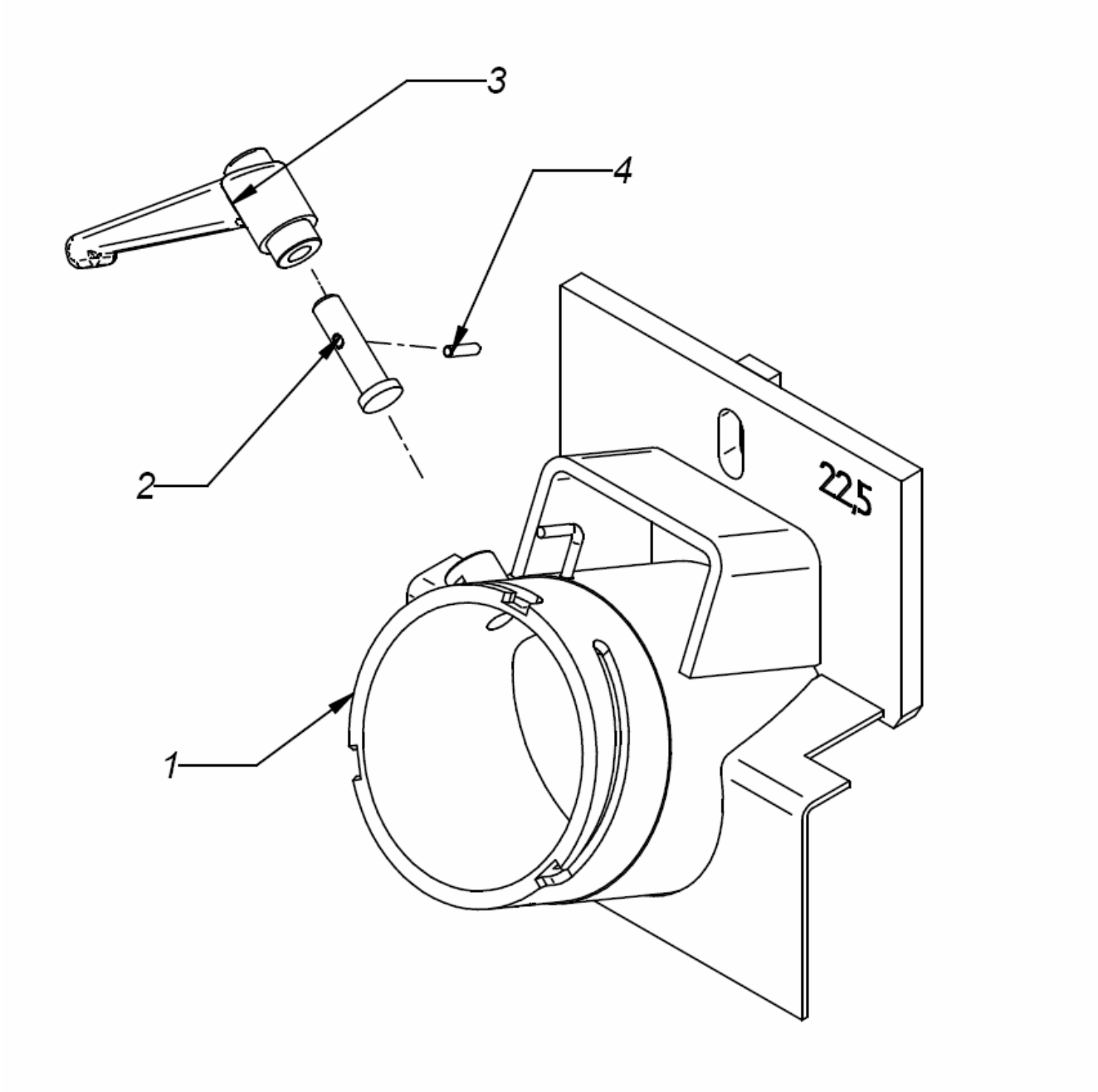
WSP-0152-03-01-00-0			BRACKET HEAD ASSY 45°,	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
3.1	WSP-0152-03-01-10-1		BRACKET HEAD 45°	1
3.2	BLD-0152-03-01-04-0		TUBE BLOCADE,	1
3.3	RKJ-000010		HANDLEVER GN 300-63-M8	1
3.4	KLK-000004		SPRING PIN 3x12	1



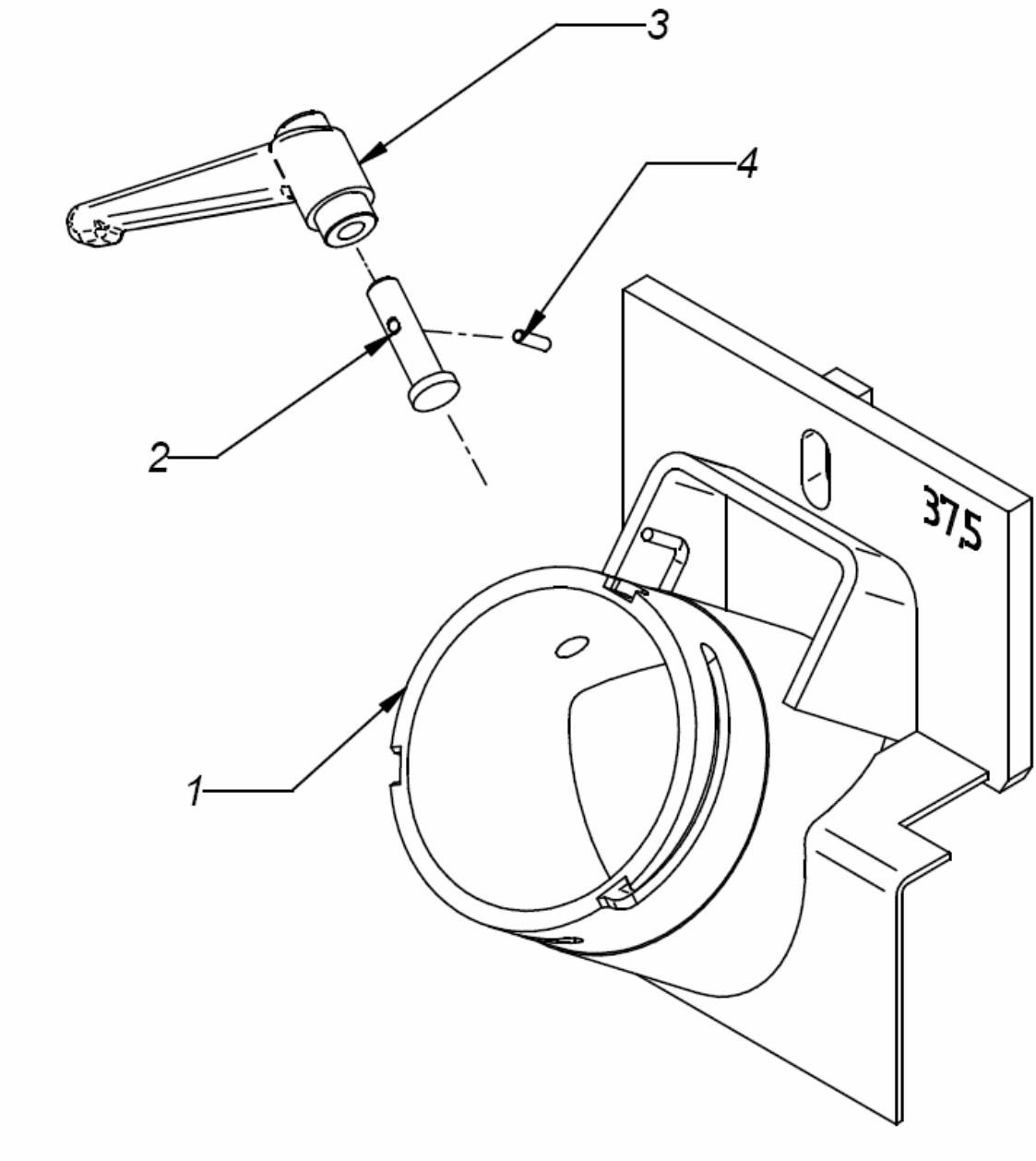
WSP-0152-03-03-00-0			BRACKET HEAD ASSY 00°,	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
3.1	WSP-0152-03-03-10-1		BRACKET HEAD 00°	1
3.2	BLD-0152-03-01-04-0		TUBE BLOCADE	1
3.3	RKJ-000010		HANDLEVER GN 300-63-M8	1
3.4	KLK-000004		SPRING PIN 3x12	1



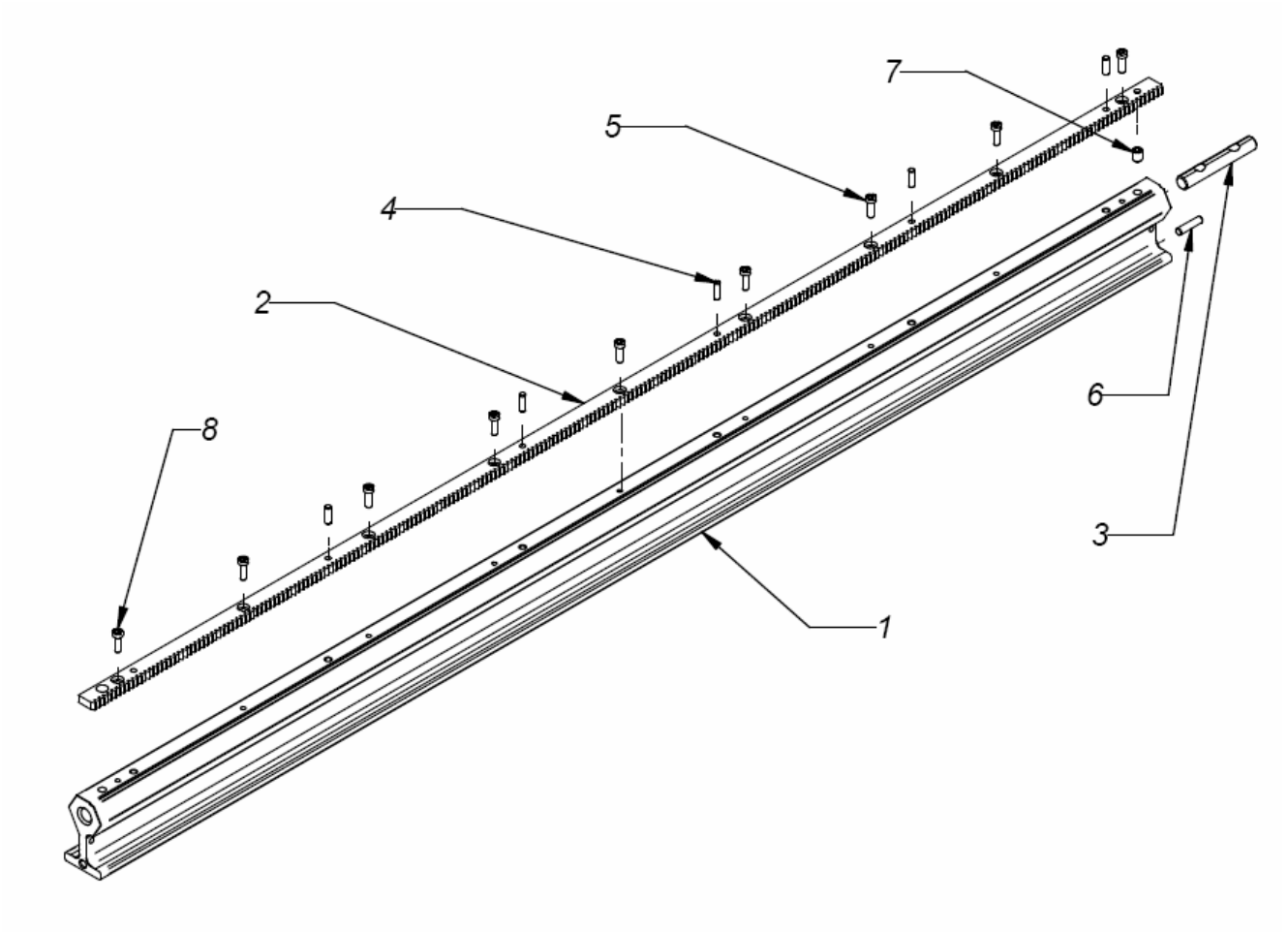
WSP-0152-03-10-00-0			BRACKET HEAD ASSY 22,5°	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
3.1	WSP-0152-03-10-10-0		BRACKET HEAD 22,5°	1
3.2	BLD-0152-03-01-04-0		TUBE BLOCADE	1
3.3	RKJ-000010		HANDLEVER GN 300-63-M8	1
3.4	KLK-000004		SPRING PIN 3x12	1



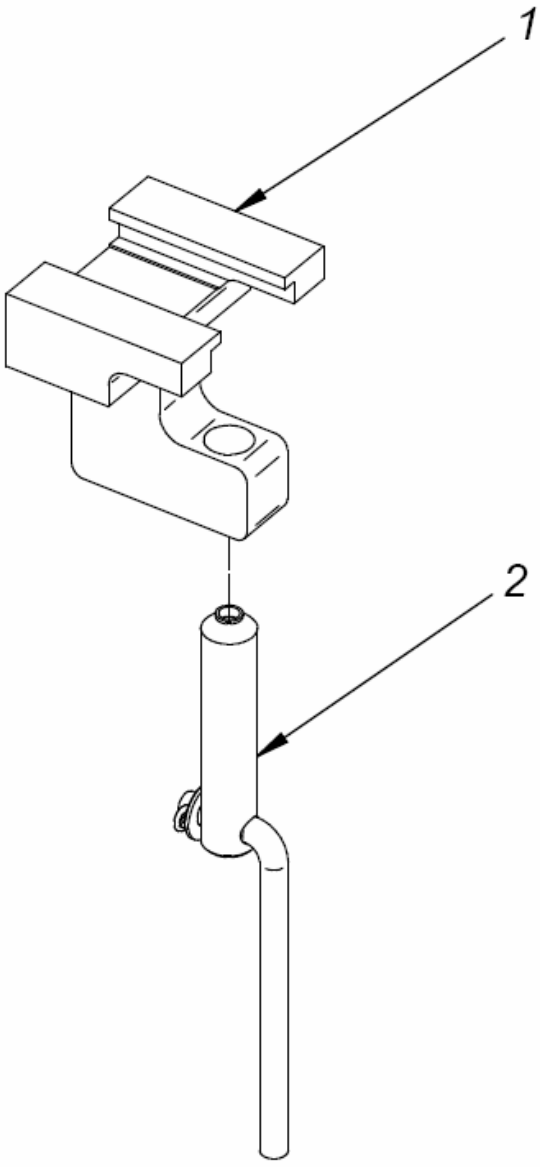
WSP-0152-03-11-00-0			BRACKET HEAD ASSY 37,5°	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
3.1	WSP-0152-03-11-10-0		BRACKET HEAD 37,5°	1
3.2	BLD-0152-03-01-04-0		TUBE BLOCADE	1
3.3	RKJ-000010		HANDLEVER GN 300-63-M8	1
3.4	KLK-000004		SPRING PIN 3x12	1



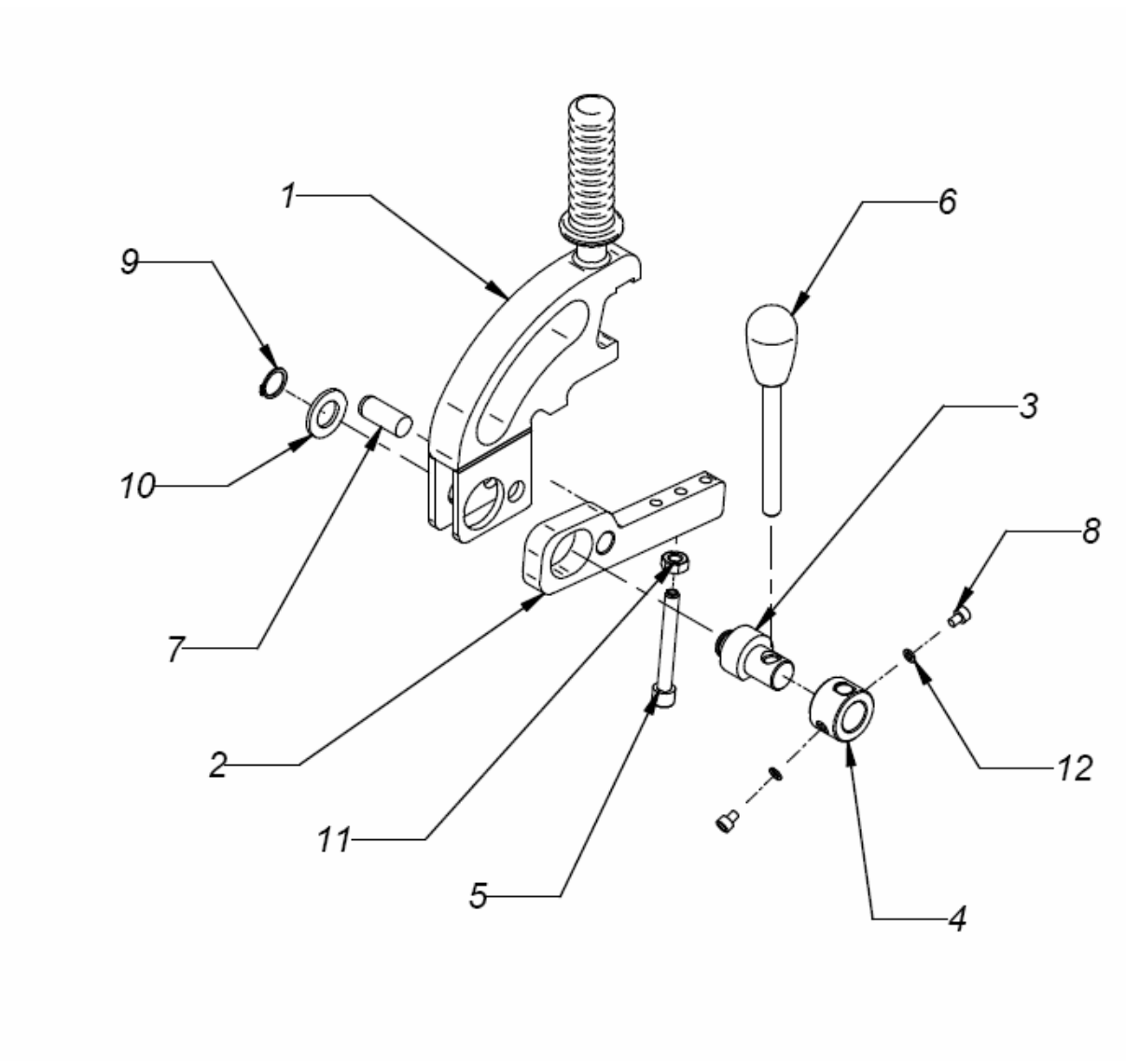
SGM-0152-04-01-00-2			SEGMENT GUIDE ASSY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
4.1.1	SGM-0152-04-01-01-1		SEGMENT GUIDE	1
4.1.2	LST-0152-04-01-02-1		GEAR RACK	1
4.1.3	LCZ-0152-04-01-03-1		SEGMENT GUIDE CONNECTOR	1
4.1.4	KLK-000047		DOWEL, PIN 5 x 16 MM	5
4.1.5	SRB-000174		HEX. SOCKET BOLT M5 x 16	6
4.1.6	KLK-000061		DOWEL, PIN 6nx6x25	1
4.1.7	WKR-000408		HEX. INSERT SCREW M8x14	2
4.1.8	SRB-000288		HEX. SOCKET BOLT M5 x 10	2



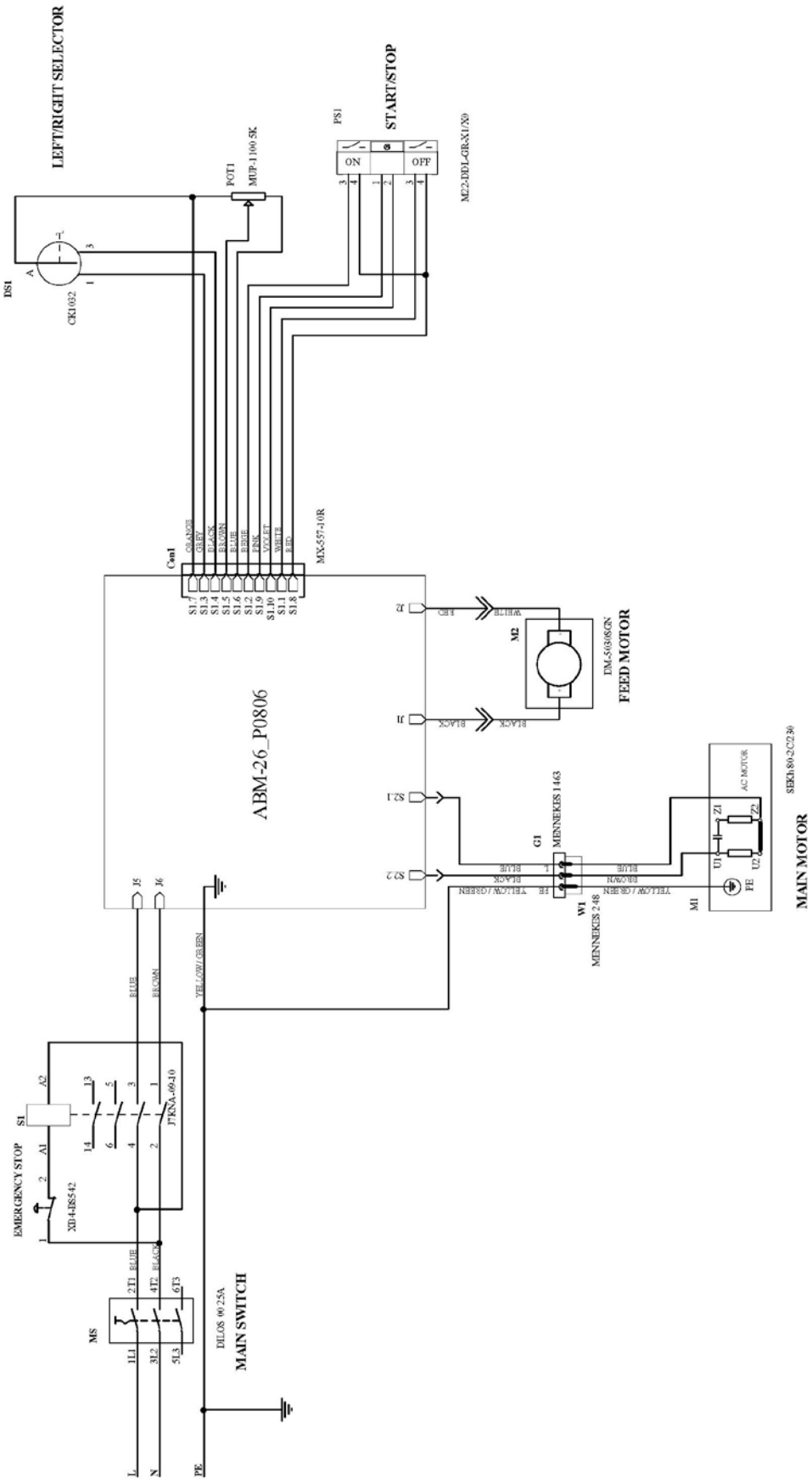
ZCS-0152-04-02-00-1			CLAMPING GUIDE ASSY	
ITEM	PART NUMBER	VERSION	DESCRIPTION	Q-TY
4.2.1	ZCS-0152-04-02-10-1		CLAMPING GUIDE	1
4.2.2	SRB-0152-04-02-20-1		CLAMPING SCREW WITH GLOBULE ASSY	1



UST-0152-04-04-00-3			GUIDE SET BLOCK ASSY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**Q-TY**
4.4.1	KRP-0152-04-04-10-4	1767	FRAME GUIDE SET BLOCK	1
4.4.2	RAM-0152-04-04-02-0		ARM GUIDE SET BLOCK	1
4.4.3	LCZ-0152-04-04-03-0		ECCENTRIC GUIDE SET BLOCK	1
4.4.4	TLJ-0152-04-04-04-0		ECCENTRIC SLEEVE	1
4.4.5	SRB-0152-04-05-00-0		SPECIAL SCREW WITH GLOBULE	1
4.4.6	DZW-0152-04-04-05-0		SPOKE HANDLE INCLUDING KNOB (ASSY)	1
4.4.7	KLK-000098		PIN DOWEL 16n6n40	1
4.4.8	SRB-000138		HEX. SOCKET BOLT M6x8	2
4.4.9	PRS-000011		EXTERNAL RETAINING RING- 20Z	1
4.4.10	PDK-000105		ROUND WASHER 21	1
4.4.11	NKR-000002		HEX. NUT M10	1
4.4.12	PDK-000046		SPRING WASHER 6,1	2



IX. ELECTRIC DIAGRAM



X. EC DECLARATION OF CONFORMITY

Declaration of compatibility

We

PROMOTECH Ltd.
Elewatorska street 23/1
15-620 Bialystok, Poland

declare with full responsibility that product:

Beveling machine for sheet edges
ABM-26

which the declaration applies to is in accordance with the following standard(s) placed below:

EN 50144-1, and satisfies safety regulations of guidelines: 2006/95/EC, 2006/42/EC

Białystok, 2010-02-16

_____
Chairman

XI. WARRANTY CARD

Beveling machine for sheet edges ABM-26

1. The Buyer is granted by the Manufacturer a warranty for 6 months but not longer than 12 months from the date of manufacture.
2. The Buyer loses his warranty in case of:
   - breaking warranty seals;
   - arbitrary self repairs or modifications;
   - not using the appliance in conformity with the operation manual;
   - using inappropriate tools or equipment other than stated in the operation manual;
   - damage that has not been caused by material or assembly faults.
3. The Guarantor is obliged to perform warranty repairs within 14 days from the appliance delivery to service station and within 21 days in case of mail delivery.
4. Fuses, machining tools, standard equipment, and damage caused by normal wear (e.g. damage of milling cutter frames, guides, holders, etc.) are not covered by the warranty.
5. Appliances without original packaging will not be accepted for warranty repairs after warranty period the Seller is not responsible for damage of appliances caused by transport to and from service station without original packaging.

_____

the Buyer

Date of Manufacture:..... Serial No.....

Date of Purchase:.....

The Seller's Signature and Stamp……